

Alaska Road Commission Historical Narrative

Final Report

by

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PREFACE

On August 17, 1956, Secretary of Commerce Sinclair Weeks and Secretary of the Interior Fred A. Seaton jointly announced that, effective September 16, the Alaska Road Commission, formerly a part of Interior and before that of the War Department, would be absorbed by the Bureau of Public Roads, a part of Commerce. Established in 1905 as an agency of the War Department and named the Board of Road Commissioners for Alaska, it soon was called the Alaska Road Commission. In 1932 it was transferred to the Department of the Interior in the wake of a reorganization.

The 1956 transfer to the Bureau of Public Roads took place because in that year Congress included Alaska on a modified basis in the Federal Aid Highway Act. This legislation eliminated much of the uncertainty about future funding, thus facilitating planning. As previously stated, it also called for the demise of the venerable Alaska Road Commission, which ended the existence of this 51-year-old agency. The Board of Road Commissioners for Alaska started its work in 1905 when less than a dozen miles of wagon roads existed in Alaska. It was directed by a board of road commissioners consisting of three military officers, one of whom occupied the position of president of the board, another that of chief engineer, and the third as secretary and disbursing officer.

The first major road built in the territory was the Richardson Highway from Valdez to Fairbanks. This route originated as a winter trail, but with the increased traffic caused by the rapid development of the placer gold deposits around Fairbanks and construction of the military telegraph line, "The Trail," as this route was originally known, was gradually improved. First it became a wagon road, later the commission upgraded it sufficiently to accommodate the model-T Ford, and eventually it became a modern, paved highway kept open on a year-round basis.

Construction methods changed radically from 1905 to 1956. The early labor consisted largely of building crude wagon roads, cutting brush, and flagging winter trails. During the 27 years from 1905 to 1932 the Alaska Road Commission developed an elaborate system of trails

and sled roads, totaling more than 10,000 miles, but less than 500 of those miles consisted of low-standard roads. This system was designed to serve military needs as well as those of the largely itinerant population of fishermen, trappers, and miners. The commission eventually abandoned the system of trails and sled roads and instead built airfields. Heavy construction machinery gradually replaced hand labor and horses and wagons. The Alaska Road Commission acquired its first automotive equipment, surplus military vehicles, after World War I. Giant earth-movers that could haul twenty times as much material at greater speeds than the original equipment came into use, and where workers had earlier corduroyed mudholes to support horses and wagons, in the 1950s they laid asphalt to enable rapid, dustfree travel.

By 1956 the Alaska Road Commission had accomplished much. It had grown from a few dozen employees to a well-organized highway department. The headquarters staff in the early 1950s consisted of more than a hundred individuals, and district engineers at Anchorage, Fairbanks, Valdez and Nome handled field operations with more than a thousand employees during the peak of the summer construction season. It had pioneered Alaska's transportation network -- then consisting of 998.5 miles of through roads, 1,234.6 miles of feeder roads, 1,361.3 miles of local roads, and many bridges, airstrips, tramways, and ferries which it had built and maintained over the years -- and provided important employment opportunities for many Alaskans.

The year 1956 was indeed a milestone in Alaska's transportation history. For decades territorial leaders and citizens had argued that they were entitled to benefits bestowed by the Federal Aid Highway Act of 1916 and its various subsequent amendments. A significant measure, it helped revolutionize America by providing federal money for highway links between country and city and made the automobile widely popular as a new means of travel. The federal government would match state highway expenditures if the roads met its high standards. But in the western states, where the federal government owned large areas of "public domain" lands which could not be taxed by the states and therefore produced no revenue, a more favorable matching ratio than the dollar-for-dollar

applicable in other states was devised. This formula was based on the total area of the state, the proportion of public domain to the total area, the state's population, and the existing road mileage used for transporting the mails.

As members of Congress contemplated Alaska's vast, nearly roadless area and the fact that better than 99 percent was part of the public domain, they shied away from the expense of including the territory in the 1916 legislation. Alaska's delegates to Congress attempted time and again between 1916 and 1956 to amend the Federal Aid Highway legislation to include the territory, always unsuccessfully. Other noncontiguous possessions without Alaska's problem of vast size and huge public domain, such as Hawaii and Puerto Rico, had little public domain land and, therefore, participated in the national program much earlier than did Alaska.

It was not until the early 1950s that Congress, largely at the urging of the military, appropriated substantial amounts of money for an accelerated road construction program. Between 1950 and 1952 the Alaska Road Commission received \$20 million or more annually for these purposes. And even though appropriations from 1953 on dropped considerably after those fat three years, the precedent for more spending and the "defense" justification were set. After all, America and the Soviet Union were engaged in the so-called "Cold War", and the United States considered Alaska its forward bastion in that conflict. Also, Alaska was in a better position to participate financially because in 1955 the territorial legislature had raised the motor fuel tax from two to five cents a gallon. But even with this boost, monies from this source and other highway user taxes would amount to only slightly more than \$2 million a year, inadequate to even cover maintenance.

At the urging of Delegate E. L. "Bob" Bartlett, Congress decided to allow Alaska to use federal matching funds for both construction and maintenance. Congress arbitrarily set the Territorial matching requirement at 10 percent. In return for these benefits, Bartlett agreed to have Alaska's share of the funds computed on a modified basis. Instead of giving the territory credit for all the public domain and nontaxable Native lands, as would ordinarily have been the case, he proposed that

only half of those public lands be used in the matching formula.¹ The committee agreed, but on the Senate floor Francis Case of South Dakota complained that Alaska would receive too much money in comparison with the contiguous states. Therefore, the fraction of the public domain used in computing the matching formula was reduced from one-half to one-third. Under this formula, Alaska was allotted \$13,390,000 in fiscal year 1958.² The same legislation, however, also excluded Alaska from the new 41,000-mile National System of Interstate and Defense Highways. To finance this program, Congress increased federal taxes on tires, trucks, trailers, buses, and motor fuel in the lower 48 states as well as in Alaska.³ But despite this obvious inequity, Alaska at last participated in the Federal Aid Highway program.

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CHAPTER ONE

EARLY EXPLORATION OF ALASKA

Although United States citizens traded and undertook sealing and whaling voyages in the North Pacific and the Arctic in the early 19th century, the government only slowly joined other nations in exploring the Far North. Numerous nations had searched for the Northwest Passage, hoping to gain a shortcut to the Orient, but the United States did not officially participate in this quest until 1850, when Congress accepted two ships from the American merchant Henry Grinnell to join the massive search for the British Sir John Franklin arctic expedition. The Secretary of the Navy appointed Lieutenant Edwin Jesse De Haven to command.

Elisha Kent Kane, the most famous member of a prominent Philadelphia family and a surgeon on De Haven's expedition, launched his own expedition in 1853. When Kane failed to return on schedule, the Navy dispatched two relief vessels under the command of Lieutenant Henry J. Hartstene. Later expeditions led by Isaac Israel Hayes and Charles Francis Hall followed, all exploring the arctic seas.¹ Although these explorers and their successors in the 1860s had no direct contact with Alaska, they established a tradition of scientific arctic exploration.

The Western Union Telegraph Expedition

In 1865, two years before the American purchase of Russian America, the Western Union Telegraph Company undertook an audacious scheme -- namely, to build a telegraph line from the United States along the Great Circle land route through North America to Siberia and the Amur Basin, there to connect with a Russian wire from Europe. The line was to pass through British Columbia and the Yukon Territory, through Russian America, and thence thousands of miles through Siberia. Much of the territory to be traversed was unexplored wilderness. The Western Union Telegraph Company invested heavily in the project, hoping to install two wires capable of handling a thousand messages a day at \$25 per message, which would have amounted to gross revenues of \$9 million annually.

There were to be three divisions, one each in Canada, Russian America, and Asia. Colonel Charles Bulkley assumed overall command, and the directors chose Robert Kennicott to head the Russian-American division.² Kennicott had spent the winter of 1860-61 at Fort Yukon under the auspices of the Smithsonian Institution and the Chicago Academy of Sciences. Kennicott had worked hard and collected much ethnological and zoological material. For the Western Union Expedition, he engaged a few other naturalists and organized the "Scientific Corps" to gather data and specimens as official work permitted. The Scientific Corps even had its own flag, a scallop outlined on a blue cross, and members wore uniforms.³

The Russian-American phase of the telegraph work was further divided into two sections -- one to explore the Yukon east from Nulato and connect with the party working north through Canada, and the other to investigate the area between the Yukon and Bering Strait. Then, Kennicott suddenly died near Nulato in May 1866. William Healy Dall, a young scientist in the party, succeeded him as chief of the Scientific Corps, and the work proceeded. In the summer of 1867 members of the expedition learned, much to their sorrow, that the telegraph project had been terminated because at long last the Atlantic cable had been laid successfully.⁴ This killed the commercial prospects for the overland telegraph line.

The Work of the United States Coast Survey

In the summer of 1867 the United States Coast Survey, the leading federal civilian scientific agency, undertook the first official government exploration of Alaska which was intended to serve political purposes. The Superintendent, Benjamin Pierce, ordered Coast Survey Assistant George Davidson, who had worked on the Pacific Coast since 1850, to prepare for a reconnaissance to the northwest. Davidson and his crew were to collect information which was to be used to lobby members of the House of Representatives to vote for the bill appropriating money for the Alaska purchase.⁵ They made the reconnaissance and compiled much useful information on the geography, resources, and coastal features of Alaska and produced a map of the region for the Department of State. In 1869 the survey is-

sued another map (Alaska and Adjoining Territory), compiled from surveys by the Russian naval officer and cartographer, M. D. Tebenkov, from Russian manuscript items obtained in Sitka, from the notes of naturalist William Healy Dall about the Yukon, and from Davidson's observations. In that same year, the Coast Survey also published harbor charts for Sitka, St. Paul in the Pribilof Islands, and two harbors on Unalaska Island.

Davidson returned to Alaska in 1869, but it was William Healy Dall who was the principal American scientist in Alaska during the early years following the purchase. Dall left on the first of his four cruises as a Coast Survey assistant in 1871. He and other agency personnel obtained specialized knowledge about Alaska as the Coast Survey slowly traced the 34,000-mile-long coastline of the new territory.

Captain Charles F. Raymond's 1869 Trip to Alaska

In 1869 the government sent Charles F. Raymond, a young Army captain, to Alaska to investigate trade and discover whether Fort Yukon, established in 1846 by the Hudson's Bay Company at the junction of the Porcupine and Yukon Rivers near the Arctic Circle, was in American or Canadian territory. Raymond wrote a superb description of the Yukon River and noted various natural resources, such as spruce and birch, but found no signs of minerals in the area. He believed that agriculture would be of secondary importance, for individuals were not interested in it and engaged in other pursuits.⁶ A couple of years later, in 1871, the Office of the Chief of Engineers utilized Raymond's notes when it published a map of the Yukon River.

The War Department Turns Its Attention to Alaska

The War Department's responsibility for mapping the Far West ended in the early 1880's, and it again turned its attention to Alaska. Lieutenant Patrick Henry Ray, while attached to the Army Signal Service from 1881 to 1883, led a ten-man expedition to Point Barrow as part of the U.S. participation in the International Polar Year. There he observed the weather,

tides, and the earth's magnetism and made several overland explorations from his Point Barrow base.⁷

After Ray returned to St. Michael at the mouth of the Yukon River in the fall of 1883, he met a group led by Lieutenant Frederick Schwatka. The latter's party had just finished a summer's reconnaissance which took them from southeastern Alaska, across the coastal range, and down the Yukon River. Schwatka's official report described his journey and also mentioned that the army would have no problems controlling the Native population. Like countless summer travelers after him, he complained about "the blistering heat and dense swarms of gnats and mosquitoes that met us at every turn."⁸

A year later, Lieutenant W. R. Abercrombie led a party on a difficult reconnaissance up the ice-choked Copper River, passing the Childs and Miles Glaciers before the lateness of the season forced a return to the coast.⁹

In 1885 the Army sent Lieutenant Henry Allen into the Prince William Sound region and ordered him to ascend the Copper River before the ice broke. Allen and his group successfully accomplished their goal, and then crossed the Alaska Range to the Yukon River. Allen, as others before him, was dubious about Alaska's agricultural potential but noted that hardy vegetables could be raised in the Yukon Valley. He also pointed out that it was possible to build a road from Prince William Sound to the Yukon River.¹⁰

Various Phases of Federal Exploration

After Allen's expedition in 1885, the War Department made no further appropriations for Alaskan explorations. In essence, the Army's role in Alaskan scientific exploration between 1867 and 1877, can be divided into three phases. The first occurred between 1867 and 1877, when the Army governed the region with headquarters at Sitka and various posts scattered along the southern coast. During this period the Army did very little exploratory work and mainly restricted itself to tours of inspecting

generals and one reconnaissance along the Yukon River. The Army Signal Service dominated the second phase, beginning before the Army left Alaska and ending in the early 1880s. Army personnel made meteorological observations in the Aleutians and the Yukon-Kuskokwim Delta during this time; they contributed mainly background information. The third phase resembled the pre-Civil War explorations of the trans-Mississippi West undertaken by the Corps of Topographical Engineers, which, after 1863, ceased to exist as a separate organization and became the U.S. Army Corps of Engineers. The original overland reconnaissance resulted principally from one departmental commander's curiosity about an unknown wilderness combined with the ambitions of his energetic aides. This phase ended with Henry Allen's 1885 exploration of the Copper, Tanana, and Koyukuk Rivers.¹¹ From 1886 until 1898 the only official U.S. expeditions to Alaska were to the Selawik and Kobuk River valleys by officers of the United States Navy and the Revenue Marine Service. Science in the military services declined, and in 1885 Congress and the press criticized the newer civilian scientific bureaus elsewhere in the federal government when the so-called Allison Commission directly tackled the issue of civilian versus military control of federal scientific activity. It proposed the creation of a federal department of science and also suggested the consolidation of surveying and mapping agencies. This was never done. It took some years, prolonged conflict of personalities, meager and uncertain appropriations, and various re-organization proposals before the new programs worked smoothly.¹²

The Navy's hydrographic office and the Coast and Geodetic Survey continued conducting hydrographic surveys in Alaska. The former incorporated on its charts the results of surveys by naval vessels in southeastern Alaska. After 1880, however, it concentrated on mapping foreign waters and restricted itself to the coasts facing and bordering Siberia. The Coast and Geodetic Survey, with principal responsibility for domestic waters, continued its work and issued charts, particularly for southeast Alaska and the Aleutians.¹³ In short, various agencies and bureaus of the federal government had accomplished much work in Alaska during this short time with very limited financial resources. Historian Morgan Sherwood, a student of federal exploration in Alaska, concluded that

"given the tiny populations, the remoteness of Alaska, the limited economic inducement to development, the national political, intellectual, and economic atmosphere, federal exploration of the Far Northwest was relatively fast, extensive, and progressive."¹⁴.

The First Gold Discoveries in Alaska

But if the federal government's interest in Alaska was not continuous, a stream of hardy individuals kept coming North to try to make their fortune. Written records reveal that as early as 1869 William Henderson and James Strichan had gone to the Chilkat country to prospect. In 1871 a soldier found gold in the Indian River on the outskirts of Sitka, and in 1880 Joseph Juneau and Richard T. Harris found the precious metal near the site on which Juneau was to be built. Prospectors roamed throughout southeast Alaska, and before long a few made their way over the Chilkoot Pass to the headwaters of the Yukon River.¹⁵

Gold Found in the Dease Lake Region of British Columbia

In 1874 miners discovered gold in the Dease Lake region of British Columbia. As news of the discovery spread down the Stikine River, it sparked a minor gold rush. Fort Wrangell, at the mouth of the Stikine, boomed as a transfer point of cargo and men from ocean craft. In 1874 some three thousand people traipsed through Fort Wrangell, and it soon became a popular wintering place for miners, with in the construction of stores, bakeries, restaurants, and a saloon and dance hall.¹⁶ In the early 1880s, numerous prospectors examined the bars of the Yukon River for gold, and by 1886 some two hundred miners had gradually worked their way down the Yukon to the mouth of the Steward River. Leroy N. McQuesten and his partners built a trading post, and that winter Arthur Harper, one of the other traders, convinced two prospectors to explore the gravels and bars of the Fortymile River which joined the Yukon River 100 miles farther downstream. The two found gold later in the season, and a minor stampede followed.¹⁷

Further Gold Discoveries in Alaska

That same year gold was discovered at Franklin Creek, a tributary of the Fortymile River in American territory. More discoveries followed. Mining activities began on Dome Creek in 1893, in the placers of Wade Creek in 1895, and in those of Chicken Creek in 1896. In the spring of 1896 the center of the footloose mining population had shifted from Fortymile in the Yukon Territory to Circle City on the banks of the Yukon River on American soil.¹⁸ In the late fall 1896 George Washington Carmack and his two Indian companions found gold in quantities never before seen in the Yukon. Soon thousands rushed to the Klondike in Canada's Yukon Territory.¹⁹

The U.S. Geological Survey Comes to Alaska

It was no wonder that the mineral discoveries awakened the interest of the U.S. Geological Survey. In 1895 Congress ordered it to report on the gold and coal resources of Alaska and appropriated \$5,000 for the study. Two scientists spent a month in southeastern Alaska, then traveled to Kodiak, the Alaska Peninsula, and the Aleutian Islands. The following year Congress appropriated another \$5,000 to finance a mineral survey of the Yukon gold regions. In his 1896 report, the director of the Geological Survey described the work performed during the last couple of field seasons and recommended that the survey's Alaska budget estimate of \$2,500 for fiscal year 1897-1898 be increased to \$25,000. The recommendation roughly coincided with the big Klondike strike of the fall.²⁰ In 1898, geological studies of Alaska on a regular basis began.

Worldwide Attention On Alaska

The rush focussed worldwide attention on the north and lured thousands to the Klondike and Alaska, among them many not seeking gold, such as sportsmen, scientists, political and civic figures, con men, and fugitives from the law. They came from all parts of the United States, Canada, and abroad. At the same time, federal bureaus, some new to the north, be-

gan work to fill the knowledge gaps about the region and to disseminate available data in their respective fields. For example, the Bureau of Navigation published a circular on navigational conditions on the Yukon and Porcupine Rivers; the Labor Department issued bulletins on opportunities, prices, and problems of capital and labor in the gold fields; and the Department of Agriculture dispatched investigators to evaluate the agricultural possibilities of the North.²¹

Congress Reacts to the Gold Rushes

Between 1897 and 1899 Congress passed two major pieces of legislation. The first made various provisions for the construction of railroads and extended the homestead laws to Alaska. It also provided that citizens of Canada were to be accorded the same mining rights as American citizens were granted in the Dominion and that goods could be transported duty free between Alaskan and Canadian ports if the latter granted reciprocal rights.²² The other piece of major legislation was a clarifying act which provided for the punishment of crime in Alaska and also gave a code of criminal procedure. This act was very complex and lengthy. It codified the laws of Oregon and modified them somewhat for Alaska. It also included a tax system, the first levied in the district, and legalized the sale of liquor.²³

Lawmakers introduced a great many Alaska measures between 1900 and 1901, including bills pertaining to Native welfare, reindeer herding, education, the fisheries, the judiciary, and a recurrent request for an Alaskan delegate to Congress. In 1900 Congress passed a civil code and a code of civil procedure. With this piece of legislation, Congress began to deal directly with the problem of providing a general governmental system for Alaska. The measure divided Alaska into three parts, and courts were established at Sitka, Nome, and Eagle City on the Yukon, with authority to convene elsewhere when necessary. It also made possible the incorporation of municipalities for the first time.²⁴

The Army Returns North

As early as 1871, disputes had arisen over the Canada-Alaska boundary, but little attention had been paid to them. Two routes to the gold fields of Alaska led through Haines Mission and Dyea at the head of Lynn Canal, claimed by Canada. During August and September of 1896, Captain D. D. Gaillard of the Corps of Engineers conducted a preliminary examination of the disputed area and concluded that the Canadian claims were unjustified. In order to protect its interests until the matter could be settled officially, the United States once again ordered troops north. Army troops arrived at Dyea and Fort Wrangell in February 1897, and a detachment of troops was stationed at Skagway.²⁵ In 1898, both governments agreed that a joint commission should settle the matter. No agreement was reached, however, and in 1903 officials renewed negotiations. On October 20 of that year an arbitration tribunal decided in favor of the American claim except for two small islands which went to Canada.²⁶

After receiving conflicting reports about disorders in Alaska in the summer of 1897, the War Department ordered Captain Patrick Henry Ray and Lieutenant Wilds P. Richardson to investigate. The two officers were to determine the extent of the troubles, whether the food supply was sufficient to sustain the population, and if troops would be required to enforce law and order.²⁷ The two officers arrived at Saint Michael near the mouth of the Yukon River in August 1897. They observed strained and destitute people and feared that the coming winter might bring starvation. Ray requested that a detachment of troops be sent to Saint Michael for temporary duty, and in September of that year Colonel George M. Randall with two officers and 25 enlisted men arrived and established a military station, known as Fort St. Michael.

By late fall Ray had decided that it was necessary to station a permanent military force at a central point in interior Alaska. The presence of the troops, he reasoned would not only have a salutary moral effect on the population but also aid the civil authorities in maintaining law and order.²⁷ Since most settlements were located along the Yukon River, Ray recommended that the first and largest post be located on the

north bank of the Yukon River opposite and slightly below the mouth of the Tanana. This was a geographically and commercially central location. In 1899 this became the site for Fort Gibbon.²⁸ In case the War Department decided to establish a post on the upper Yukon River, Ray recommended a site at the mouth of Mission Creek near Eagle City close to the Canadian border. In 1899 the War Department chose this approximate site for the construction of Fort Egbert.

Finally in March 1898, based on Ray's and Richardson's recommendations, the Secretary of War directed that three military exploring expeditions investigate interior Alaska. The orders were very specific, stating that the expeditions collect

all the information valuable to the development of the country regarding topographical features, available routes of travel, feasible routes for railroad construction, appropriate and available sites for military posts, mineral resources, timber, fuel, products, capability of sustaining stock of any kind, animals, etc., should be embodied in a report with necessary accompanying maps and plates, to give the department information on which to base its action, and the public as full an understanding as possible of the resources, etc., of the country.²⁹

The first of these expeditions was to drive reindeer north from eastern Alaska and then to explore the trails from the Yukon to the Tanana. The second expedition, under the command of Captain William Ralph Abercrombie, was to explore from Valdez to the Copper River and to the tributaries of the Tanana River. Captain Edwin Forbes Glenn assumed command of the third expedition. He was ordered first to Prince William Sound to explore routes to the Copper and Susitna rivers; from there he was to proceed to Cook Inlet and explore north from tidewater to one or more crossings of the Tanana. Both expeditions suffered severe hardships, and the results were hardly worth the time, energy, and money expended. The exception was the valuable work performed by topographical assistant Emil Mahlo and geologist F. C. Schrader with the Abercrombie party and geologist W. C. Mendenhall with Glenn. The U.S. Geological Survey had loaned the latter two men to the War Department for the expeditions.³⁰

Army explorers discovered suitable routes in the interior and recommended the construction of a military road. They also knew that prospect-

ors would eventually require some kind of transportation in the future and encouraged tying various mining camps into the same connecting line. A proper system of trails, roads, river transportation, or a combination of all of these would do much to enhance the economic prospects of the North.³¹

War Department Orders Military Road From Valdez to Copper Center, Eagle

In March 1899 the War Department ordered that an exploring expedition go to Valdez, open a military road to Copper Center, and from there go by the most direct route to Eagle City. Captain Abercrombie led the expedition that was to survey and mark the road, which was also to be open for public travel. In late April 1899 the members of the expedition started construction of the road. Originating at the military reservation at Valdez, it ran up the Lowe River Valley through Keystone Canyon and Thompson Pass to the Tonsina Valley, where construction ceased in October. Using only hand tools, the soldiers had built a 93-mile trail suitable for pack horses.³²

The Glenn Expedition

War Department orders of March 1899 also directed the organization of a Cook Inlet exploring expedition, under the command of Captain Edwin F. Glenn, to explore the country northward via the Matanuska, Susitna, Yentna, and Kuskokwim Rivers for the most direct and practicable route from tidewater to the crossings of the Tanana River. It was a continuation of Glenn's previous exploratory work, not a road-building enterprise. His primary duty was to find a direct route to the Tanana and from it to the military posts on the Yukon. One section of Glenn's expedition led by Joseph Herron made an important contribution when it accomplished the first official exploration of the upper Kuskokwim.³³

The Army in Retrospect

In retrospect the Army was not the best organization for exploring the North at that time. Soldiers seldom made any surveys. U.S. Geological Survey geologists or civilian topographers did most of the mapping. Army parties were too large for primary exploration, and much backtracking was necessary to carry up supplies. And finally, the Army's cumbersome and regulation-bound expeditions compared unfavorably with the extremely mobile and independent Geological Survey parties.³⁴

When the War Department created the "Department of Alaska" in 1900, garrisons were located at Fort Davis near Nome, Fort St. Michael near the mouth of the Yukon, Fort Gibbon near Tanana, Fort Rampart, Fort Egbert at Eagle, Fort Liscum near Valdez, and Fort William H. Seward at Haines. To communicate with the nation's capital from the Yukon River generally required six months for a one-way message. It was soon obvious that if the Army was to perform its function properly, it would be necessary to connect the Department of Alaska Headquarters at Fort St. Michael with the other Army posts by military telegraph and cable lines. The entire Alaska system then needed to be tied in directly with Washington, D.C. Responding to this need Congress appropriated \$405,550 for the project on May 26, 1900.³⁵

Constructing a Telegraph Communication System

Construction of the Washington-Alaska Military Cable and Telegraph System, or WAMCATS as it was called, got under way promptly. Fort Egbert became the base for building the first telegraph line, a 12-mile segment which ran along the Yukon River eastward to the Canadian boundary. There it connected with the previously constructed Canadian line which ran to Dawson City and Whitehorse. After completion of the new 12-mile segment, Fort Egbert could send messages to Dawson and Whitehorse. From there they were carried overland to Skagway and then sent by mail ship to Seattle.³⁶ When the Canadians completed the trans-Canadian line to Vancouver in June 1901, it became possible to contact the contiguous states directly from Fort Egbert.³⁷

In 1900, telegraph lines were strung between Nome and Fort Davis, a distance of four miles, and to Port Safety, about 20 miles distant. The next year, 1901, saw much construction activity. The first undersea cable in Alaska crossed Norton Sound, connecting Port Safety with Fort St. Michael, and soldiers under the command of Lieutenant George Gibbs completed the 448-mile telegraph line from Fort St. Michael to Fort Gibbon. Construction between Eagle and Valdez lagged, however, and Brigadier General A. W. Greely, the chief of the Signal Corps, sent twenty-one-year-old Lieutenant William Mitchell to Fort Egbert to investigate delays in connecting the telegraph line to the south. Mitchell made his base at Fort Egbert between 1901 and 1903 and directed the buildings of the Eagle-Valdez line to the Tanana River, some 153 miles distant, and the 204-mile segment of the Goodpaster Line, all under rather difficult conditions.³⁸

In the summer of 1902 Mitchell completed the line to Tanana Crossing, where he met Captain George Burnell who had built the line from Valdez. Messages could now be sent from Fort Liscum on Prince William Sound to Fort Egbert on the Yukon, then retelegraphed over the Canadian line to Vancouver and Seattle. After a new submarine cable was laid from Juneau to Skagway in the summer of 1909, telegraphic messages from southeast Alaska went through Skagway and Whitehorse and down the Canadian line.³⁹

The final work consisted of joining the Fort Egbert-Fort Liscum line to the one from Fort St. Michael, which extended only to Baker on the Tanana River. In January 1903 Lieutenant Mitchell rushed from Eagle to the confluence of the Goodpaster and Tanana Rivers, thus discovering an excellent route for the line. After incredibly hard work, Mitchell met Lieutenant Gibbs near the Salcha River on June 27, 1903, thus making the final connection to the trans-Alaska telegraph system. The men of the U.S. Army Signal Corps had completed the 1,506 miles of overland lines and a few hundred miles of submarine cable in just three years, one month, and one day, a truly impressive achievement against, at times, overwhelming odds. The government had spent approximately \$617 per mile for the overland lines and about \$52 per mile for the submarine cable.⁴⁰

In 1903 Congress appropriated another \$485,000 for the construction of submarine cables from Juneau to Sitka and on to Seattle, a distance of

1,377 miles, but it was not until 1904 that these lines were completed. Another Congressional appropriation in April 1904 provided money for laying a submarine cable from Sitka across the Gulf of Alaska to Valdez, a distance of 600 miles. This project was also accomplished in 1904, thus completing an all-American telegraph system.⁴¹

Completion of the system did not end the job. Now arose the difficulties of maintenance. Stationed at log cabins spaced forty miles apart, detachments of soldiers maintained the line. Each detachment consisted of one Signal Corps repairman and two Army soldiers. Through blizzards, summer heat and mosquitoes, forest fires, and storms these men kept the line operating. It was lonely and monotonous duty at low wages. In 1907 the Signal Corps began to use wireless or radio equipment, and by the end of 1915 WAMCATS had reduced its land lines to 848 miles. In 1936 Congress renamed the organization the Alaska Communication System, and by the end of June 1940, radio had entirely replaced the cables.⁴²

A Senatorial Visit to the North

The gold discoveries had focussed congressional attention on Alaska. They also brought the Army back to the north once again, this time to stay and play an important role in the territory's development. With all the activity, at the turn of the century, the United States Senate appointed a subcommittee of its Committee on Territories to journey to Alaska in 1903 and make a "thorough investigation of existing conditions, her resources and her needs, with the purpose to ascertain and report what, if any, legislation is required for that district."⁴³

The four Senators assigned to the subcommittee met in Seattle and sailed for Alaska on June 28. They cruised through the Inland Passage to the head of Lynn Canal, stopping at various settlements along the way. They went over the White Pass to Lake Lebarge, the Lewes River, and along the upper Yukon River to Dawson City, where they visited the gold fields and examined the Yukon Territory's form of government. From Dawson the group continued downstream all the way to St. Michael, stopping at various settlements and Army forts. At St. Michael the U.S. Revenue Marine

Service cutter McCulloch took the Senatorial party aboard, and they visited Nome, St. Paul in the Pribilof Islands, Dutch Harbor, and Unalaska, passing through the Aleutian Islands into the North Pacific. They continued their journey along Alaska's southern coast, stopping at Karluk and Kodiak, Valdez and Sitka. The Senators visited Juneau a second time and returned to Seattle on August 26. Throughout their extensive journey, the Senators held hearings and took testimony from residents. By the time they returned to Seattle, they had covered a distance of 6,600 miles, but only 111 of those miles on land⁴⁴ (Figure 1).

Senators Hear Testimony

During the course of their journey, the Senators took testimony from sixty-one witnesses in eleven settlements and towns. The witnesses were concerned with a wide variety of subjects, ranging from agriculture to boundary questions, coal and copper deposits, the necessity for an elected delegate to Congress, fish hatcheries, freight rates, game laws, the insane, the need for lighthouses and better mail service, surveys and taxes, and the need for a territorial government and better transportation. Numerous individuals addressed the lack of roads and trails. William Daily of Ketchikan told the Senators that he represented the Unuk Mining, Smelting, and Transportation Company of Danville, Illinois. The company's mines were located forty-two miles from the mouth of the Unuk River. Daily told the group that his company at the time was constructing a wagon road to its mines at an estimated expense of \$50,000. Daily reminded the Senators that the Canadian government built roads into territories to aid economic development, but no similar provisions were made in Alaska, he complained.⁴⁵

Lieutenant William Mitchell Testifies

At Eagle on the Yukon River, the Senators called on Lieutenant William Mitchell of the U.S. Signal Corps, then in charge of building part of the Alaska telegraph system, to testify on territorial condi-

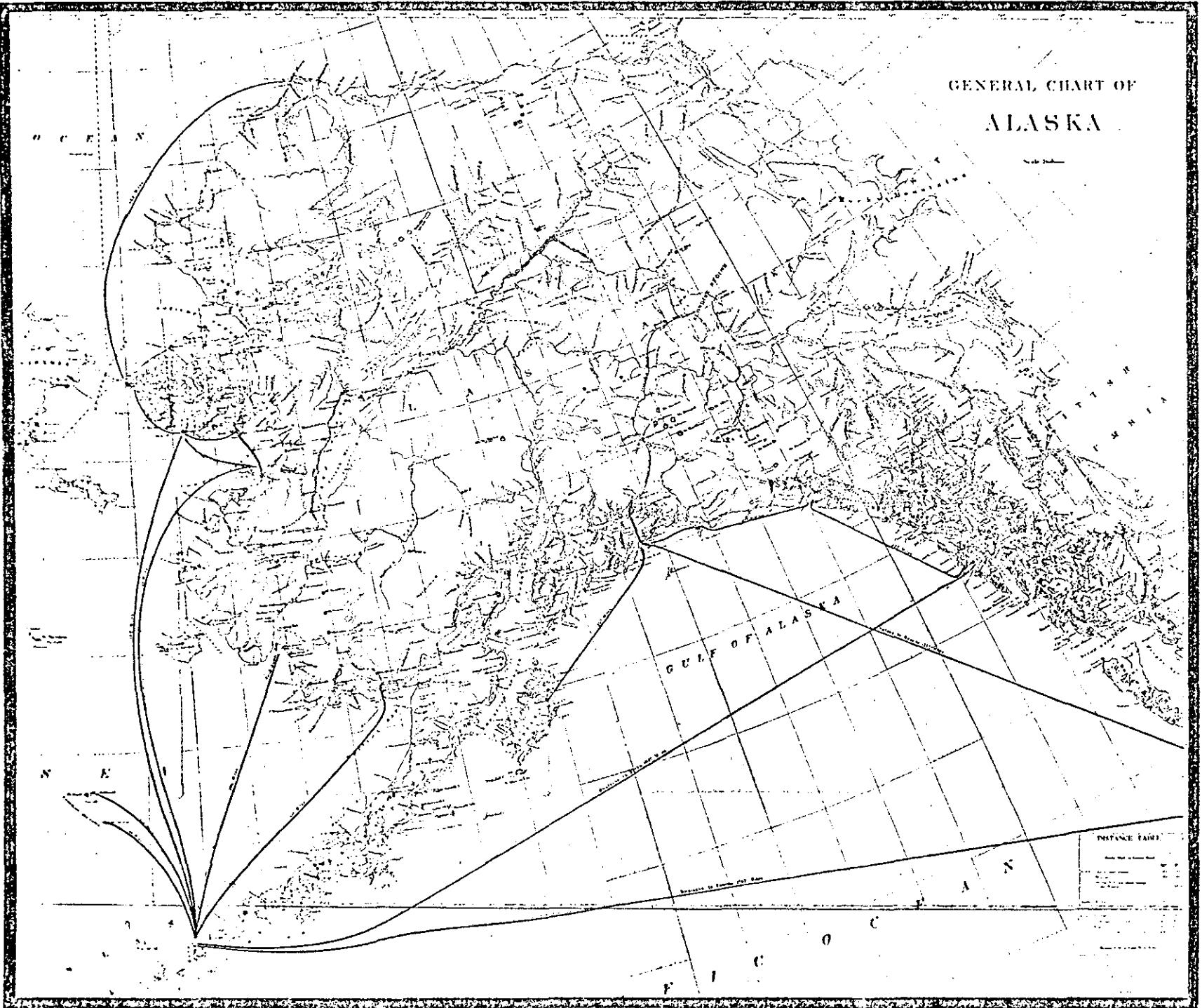


Figure 1. Route of Senate Subcommittee on Territories 1903 trip to Alaska.

tions and needs. Mitchell told the group that it would cost more than two million dollars to construct a fair wagon road from Eagle to Tanana Crossing and from there to the head of steamboat navigation at Chena at the confluence of the Chena and Tanana Rivers, a distance of about 520 miles. The lieutenant related that a wagon road from Tanana Crossing to Copper Center, a distance of 165 miles, would be easier to construct because the country was not as rugged as along the Tanana or near Eagle. It would be as expensive as the others because materials would have to be transported across the difficult coastal mountains. A continuation of the route from Copper Center to Valdez, although only 103 miles in length, would be difficult to build because of the mountainous character of the country. Mitchell told the Senators that a prospective wagon road would leave Copper Center and follow a low ridge to the Tonsina River, a distance of about 25 miles; from there to Teikel Station was another 24 miles, thence 23 miles to Saina, 13 miles to Dutch Flat, 8.5 miles to Keystone Station, and a final 12 miles to Valdez. A military trail already existed between Valdez and Copper Center. This trail connected with another one and led to Tanana Crossing. Although very crude, it made possible the transportation of supplies with pack animals.⁴⁶

The Testimony of Abraham Spring

Abraham Spring of Fairbanks pointed out that next to the necessity for a comprehensive mining code, Alaska needed roads and trails. Only Congress could appropriate the sums necessary to construct the wagon roads connecting Alaska's principal settlements. Miners themselves could build the feeder roads. Spring suggested that miners be permitted to perform road work annually in lieu of the required assessment labor on claims and that the whole system of road building should be under the direction of commissioners who know the needs of the various districts. The lack of good trails and wagon roads made mining very expensive. Miners and trading companies had built trails and bridges by subscription, each contributing as much as they could afford. But each fall the winter trails had to be reconstructed, and each spring

the summer trails and bridges had to be rebuilt. Spring explained to his audience that there was "no intelligent supervision of the work, there is no engineering skill."⁴⁷

Judge James Wickersham Meets the Senators

Federal Judge James Wickersham supported the contention of many witnesses that the cost of getting provisions from the navigable streams, particularly the Yukon, was so high as to be almost prohibitive. Witnesses had repeatedly asked that the government build wagon roads from points along the rivers to the mining camps. Wickersham explained that the development of large areas of low-grade mining ground around Nome had only been made possible by competitive, cheap ocean transportation. Goods and supplies were landed almost as cheaply as they could be bought in Seattle, Portland, or San Francisco. Supplies destined for the areas along the Yukon, however, either came down the river via Skagway and Dawson or upriver from St. Michael. Miners had to wait until winter to transport their goods on dogsleds from distributing points on the Yukon and its tributaries to the mines. Supplies destined for miners working at Coldfoot in the Koyukuk landed at Bettles, at the head of navigation but below the mining center, at \$135 per ton. From Bettles, supplies had to be forwarded to Coldfoot in the summer by a scow pulled by horses along the riverbank or, even more laboriously, by poling boats; in the winter freight traveled on dogsleds. This added an additional \$200 a ton to freight costs, making the total \$335 per ton at Coldfoot. To illustrate even further, the freight on a 50-pound sack of flour delivered to Bettles came to \$3.37. Transporting the same sack to Coldfoot cost an additional \$5.00 or a total of \$8.37. The 50-pound sack of flour eventually retailed for well over \$10.00. A table showing 1903 freight rates from St. Michael to various Yukon River points follows.

ALASKA FREIGHT RATES, 1903,
FROM ST. MICHAEL TO YUKON RIVER POINTS

Destination	North American Transportation and Trading Company's local-freight tariff between St. Michael and Dawson. (Rates in dollars per ton of 2,000 pounds or 40 cubic feet, at ship's option.)				Northern Commercial Company. Through-freight tariff between San Francisco or Seattle and Yukon River points. (Rates in dollars per ton of 2,000 pounds or 60 cubic feet measurement, April 10, 1903.)	
	Miles	Up-stream	Down-stream	Miles	North bound	South bound
St. Michael.....	0	-----	\$45.00	1,601	\$ 135.00	\$27.00
Kotlik.....	67	\$15.00	43.00	1,534	35.00	30.00
Andreafski.....	181	18.00	41.00	1,420	38.00	32.00
Russian Mission.....	293	22.00	39.00	1,308	40.00	34.00
Holy Cross.....	358	24.00	37.00	1,234	40.00	34.00
Anvik.....	405	26.00	36.00	1,196	40.00	35.00
Greyling.....	427	27.00	36.00	1,174	45.00	35.00
Kaltag.....	570	31.00	33.00	1,031	50.00	38.00
Nulato.....	610	33.00	32.00	991	50.00	39.00
Koyukuk mouth.....	630	34.00	31.00	971	50.00	39.00
Novikakat.....	762	38.00	28.00	839	55.00	42.00
Weac-Tanana.....	901	42.00	25.00	780	55.00	45.00
Baker Creek.....	981	60.00	45.00	1,000?	-----	-----
Chena-Fairbanks.....	1,201	70.00	55.00	700?	80.00	65.00
Rampart.....	981	44.00	23.00	620	55.00	47.00
Fort Hamlin.....	1,072	46.00	21.00	529	57.00	49.00
Dahl River.....	1,082	47.00	21.00	519	57.00	49.00
Fort Yukon.....	1,224	50.00	18.00	377	60.00	52.00
Circle.....	1,309	53.00	15.00	292	65.00	54.00
Star City.....	1,479	56.00	12.00	122	70.00	58.00
Eagle.....	1,499	56.00	11.00	102	70.00	58.00
Cliff Creek.....	1,537	57.00	10.00	64	70.00	59.00
Fortymile-Cudahy.....	1,548	58.00	10.00	53	70.00	59.00
Dawson.....	1,601	60.00	-----	0	70.00	60.00
Bergman.....	1,070	-----	-----	-----	100.00	75.00
Bettles.....	1,150	-----	-----	-----	135.00	95.00

Wickersham told the Senators that to develop interior Alaska's mining potential, the following wagon roads were essential:

- 1) from Valdez across to Eagle City by way of the Fortymile River;
- 2) a branch road from Tanana Crossing, north along the Tanana River to Fairbanks and thence across to Rampart;
- 3) a branch road from Circle City on the Yukon to Fairbanks;
- 4) a continuation of the Tanana Valley road to Coldfoot on the Koyukuk; and
- 5) branch roads from these main trunk lines to the various mining centers.

When asked what institutional framework was needed for road building, Wickersham suggested that a three-member road commission be appointed in each of Alaska's three judicial districts with the territorial governor an ex officio member of each commission. The chief executive was the right person for the job, Wickersham suggested, for he received a good salary and had very little to do. The construction should be financed from the monies raised in each division from the license fees paid outside of incorporated towns.⁴⁸

Formal Resolutions Given Senators

In addition to much testimony by individual witnesses favoring the construction of roads and trails, two communities also submitted formal resolutions to the Senators. The citizens of Eagle regarded the lack of roads and trails the main drawback to the development of the country. The construction of roads and trails would encourage the mining industry; furnish routes for the Postal Department and decrease the cost of mail delivery; save the judiciary thousands of dollars annually in traveling fees and reduce per diem expenses of marshals, witnesses, and jurors; and it would save the War Department thousands of dollars in freight

costs. The citizens of Nome urged Congress to make liberal appropriations for the construction of permanent roads, trails, and bridges between Nome and settlements in the interior and on the coast, and that the trails and roads be provided with guideboards or stakes of sufficient height to be readily observed above the snow line.⁴⁹

The Senators Return to Washington, D.C.

After their return from the extensive Alaska trip, the Senators summarized their impressions to their colleagues. They had been awed by Alaska's vastness and surprised at the lack of transportation facilities. "Outside the few and scattered settlements called towns, which are found in different parts of Alaska proper, and most of which are but the centers of mining interests," they commented, "there is not to be found a single public wagon road over which vehicles can be drawn summer or winter." It was true. The military trail between Valdez and Eagle, constructed by the War Department in 1899-1900, was only fit for saddle and pack animals. Summer transportation relied on the waterways and on pack horses and dog teams during the long winters. The Senators observed that Alaska's development depended "more upon the improvement of transportation facilities than upon any other one instrumentality." The federal government had done nothing to construct a transportation system. "It has neither built roads nor provided other means of transportation," the Senators stated, "and the hardy and adventurous who have sought the wealth hidden in the valley of the Yukon, the Koyukuk, and Seward Peninsula have done so amidst difficulties that can only be understood by those who have made a study of the situation." The Senators contrasted federal inactivity with Canadian achievements in the Yukon Territory. Between 1898 and 1903, the Canadian government had spent \$1,025,000 to construct and maintain 850 miles of wagon roads and winter trails leading to the camps from Dawson. Some 225 miles of the total had been thoroughly constructed and carried the heaviest of freight, such as machinery so large as to require the use of 6 to 12 horses.⁵⁰

The Senators Make Their Recommendations

The subcommittee recommended that the government construct a system of transportation routes and that the basis for such a system should be a well-built wagon road connecting the Pacific Ocean at Valdez with Eagle on the Yukon River, a distance of approximately four hundred miles. The road should follow the general lines of the military trail which Captain Abercrombie and his men had built in 1899-1900. The military telegraph line, recently completed, followed the same route. The committee explained that Valdez was the finest most northerly harbor on the Pacific Coast, open and ice-free throughout the year, and a natural gateway to the interior and a key to its economic development. Eagle, once connected by a road, should become the distributing point for American goods for most of the vast Yukon basin. Most importantly, the committee believed that a system of wagon roads and trails would allow miners to use modern heavy machinery in extracting minerals, would induce immigration, and even result in a permanent population "wedded to the soil." In conclusion, the subcommittee members stated that it was "as much of a duty to build the road [between Valdez and Eagle] and secure the American interests of the district to the United States as it was to build the first Pacific railroad to connect the Pacific Coast with the territory east of the Rocky Mountains." To finance such a program of road construction, Senators suggested that the taxes on the salmon fisheries be increased and that, together with already available revenues, these monies would "constitute an annual fund which, if wisely used, will result in a grand advance in Alaska's development and wealth."⁵¹

A Deluge of Alaska Bills

The subcommittee had distributed its report to the full Senate on January 12, 1904, and three days later a deluge of Alaska bills descended upon both Houses. Most of these measures were referred to the

Committees on Territories, and those bodies held extensive hearings in an attempt to coordinate the different parts of the Alaska program. An appropriation to conduct a preliminary survey of a wagon road from Valdez to Fort Egbert at Eagle and for a military trail between the Yukon River and Coldfoot passed quickly. The Secretary of War was to make the necessary arrangements.

Survey For a Wagon Road From Valdez to Fort Egbert

Thereupon, the War Department appointed J. M. Clapp, an assistant engineer in the Seattle office of the Corps of Engineers, to head the survey parties. Clapp assigned four of these parties, with a total of 48 men, to the Valdez-Fort Egbert survey, each to cover approximately 100 miles of the proposed wagon road. Clapp appointed Oscar A. Piper and two assistants to survey the Yukon-Coldfoot route. From there they went via the White Pass and upper Yukon to Fort Egbert. The remaining two, left Seattle with 25 pack horses on June 1, 1904, for Valdez to begin their work at that end. On August 14, 1904, the four parties had completed the 430-mile survey, and Clapp estimated that it would cost \$3,500 per mile or approximately \$1.5 million for building the wagon road from Valdez to Fort Egbert.⁵²

Reconnaissance of the Yukon-Coldfoot Route

In the meantime Piper and his men and pack animals continued downstream on the steamer John Cudahy and on June 21 landed opposite Fort Hamlin, an abandoned Alaska Commercial Company trading post named for Charles S. Hamlin, an assistant Secretary of the Treasury between 1893 and 1897 and a commissioner at the convention between Great Britain and the United States in 1897 to determine the fur seal-fishery controversy. Forty miles northeast of Rampart, at Fort Hamlin, the Yukon emerges from the flats and narrows into a single stream, flanked on either side by densely timbered ridges. After cutting trail for a couple of days, the party left the Yukon on June 24, surveyed in a northwesterly direction,

and reached Coldfoot on July 12. The party concluded its field work on August 14. Piper found about eighty well-built cabins at Coldfoot, most of them deserted for the mining season. He estimated that Coldfoot had a winter population of about sixty souls, and the whole Koyukuk Valley a population of approximately three hundred miners. He calculated that it would cost about \$6,000 to build a 136-mile trail, sufficient to meet the current needs of the miners⁵³ (Figure 2).

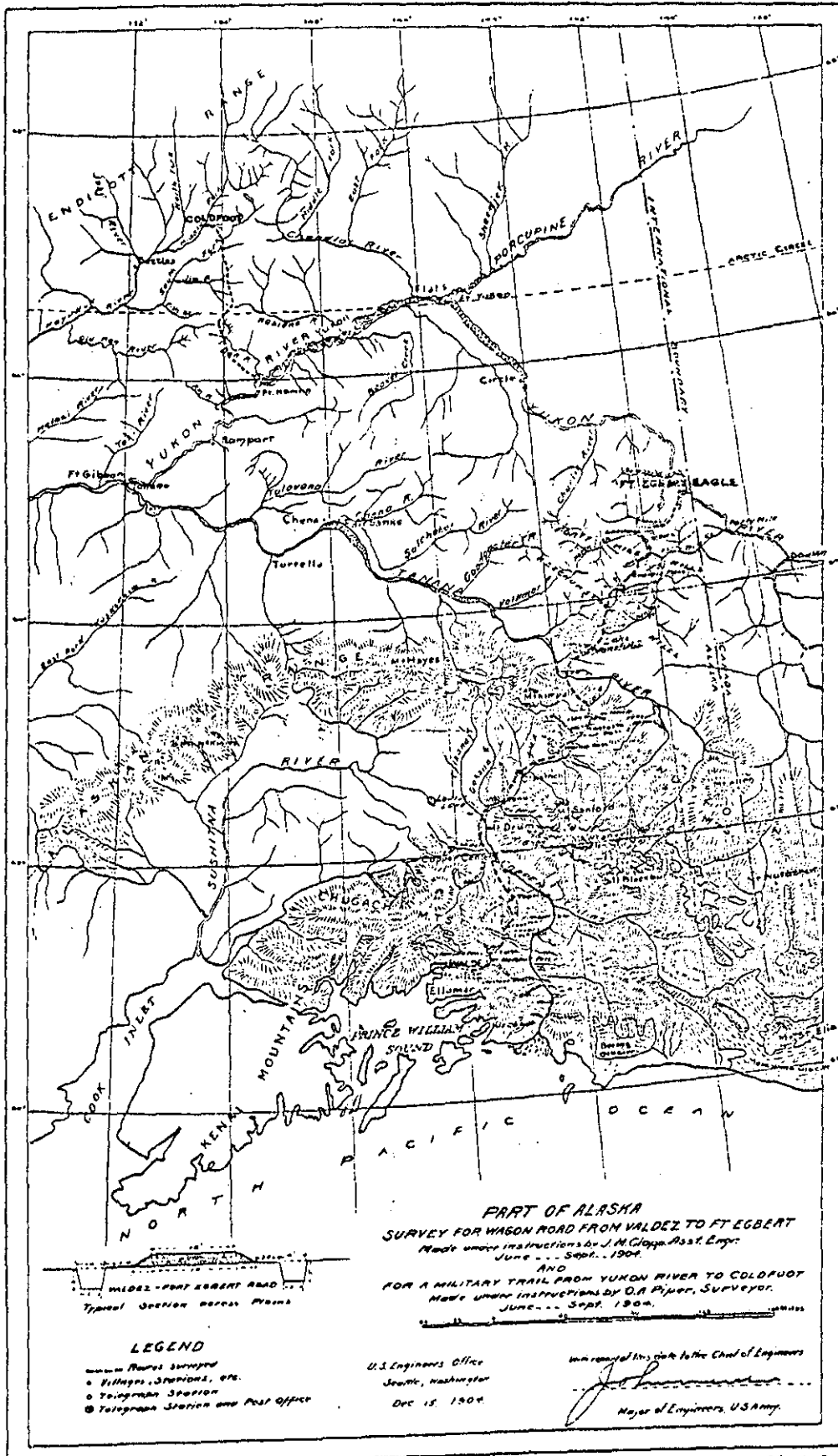
Creation of the Board of Road Commissioners for Alaska

Knute Nelson, U.S. Senator for Minnesota since 1895 and the Senator most actively involved with Alaska legislation since his 1903 visit north, introduced a measure in 1904 reapportioning the money received for licenses outside of the towns. It designated such fees the "Alaska Fund" and gave 5 percent to the Secretary of the Interior for the care of the insane, 25 percent to elected school boards under the superintendency of the territorial governor for the education of white children, and the remaining 70 percent to the Secretary of War for road construction. Roads were to be built under the direction of a Board of Road Commissioners composed of an engineer officer of the U.S. Army to be appointed by the Secretary of War and two other officers drawn from troops stationed in Alaska. The Board was empowered,

upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters . . . to any town, mining or other industrial camp or settlement, between any such town, camps or settlements . . . , if in their judgment such roads or trails are needed and will be of permanent value for the development of the district.

The Board was not to build roads or trails to transitory settlements. Any work worth more than \$5,000 was to be let for bid and awarded to

Figure 2. Survey for wagon road from Valdez to Fort Egbert and military trail between Yukon River and Coldfoot.



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the lowest bidder, but if all bids were deemed too high, the Board possessed the power to perform the required work by buying the necessary materials and hiring the men. The Board also was responsible for the maintenance of this transportation network.⁵⁴

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CHAPTER TWO

THE APPOINTMENT OF RICHARDSON AS PRESIDENT OF THE BOARD OF ROAD COMMISSIONERS FOR ALASKA

The President signed the legislation creating the Board of Road Commissioners for Alaska on January 27, 1905, and in March, upon the wish of President Theodore Roosevelt, the Secretary of War designated Major Wilds Preston Richardson of the 9th Infantry President of the Board and filled the remaining two positions with the appointments of Lieutenants George B. Pillsbury and Samuel C. Orchard. Richardson, then 44 years of age, was already an old Alaska hand. Born on March 20, 1861, in Hunt County, Texas., he had entered the U.S. Military Academy at West Point in the summer of 1880 and graduated as a second lieutenant of the 8th Infantry on June 15, 1884. He then served in a garrison in California and in frontier duty in Apache Country and in western Nebraska. Promoted to first lieutenant on December 16, 1889, he served as an instructor in tactics at his alma mater from 1892 to 1897. He received orders in August 1897 to serve in Alaska where, except for a few brief details elsewhere, he remained for 20 years.¹

The New Board Members Travel to Alaska

The War Department directed the new Board to meet at Skagway on May 15, 1905. On the way to Skagway from Seattle, Richardson and Pillsbury stopped at Ketchikan and Juneau, where Orchard met the two, and then the three men stopped at Haines. They made a preliminary inquiry into the road needs of southeastern Alaska, and soon found that citizens in the region were concerned about the expenditure of monies from the Alaska Fund, preferring to have these spent in the region in which they were collected. Richardson pointed out that "on account of the somewhat exceptional status of the courts in Alaska, embracing as it [sic] does, certain extra executive and administrative functions, a sort of sentiment of territorial division has grown up in the minds of many of the people." The Board president decided to ignore these divisions and

instead try to accomplish what was best for all of Alaska.²

At the end of May, Richardson made his first report to the military secretary of the Army. In operation for only a few weeks, the board already had received petitions from the Chambers of Commerce of Eagle on the Yukon River; Fairbanks on the Tanana River; and Valdez on Prince William Sound, all urging that further work be undertaken on the Trans-Alaskan Military Road or the "All American Route" as it also was called, from tidewater to the middle Yukon. All petitions had mentioned the constantly increasing traffic along this route and its difficulties because of the "wretched condition of the trail in many places, becoming worse each year," and for the need to construct bridges or safe ferries across wild streams. Richardson commented that the route had many advantages but was difficult to build and maintain, and the War Department already had spent large sums of money on it. Alaskan economic conditions just then did not justify the expenditures for a well-constructed highway or wagon road. There was little money for the many needs, Richardson continued, and the law also prevented the board from spending most of its funds on this kind of general work to the exclusion of local needs in various localities. The All American Route was used for supplying and maintaining the military telegraph line, and the Board, therefore, had decided to make some improvements at the terminal points of the route at Valdez and Eagle and also in the vicinity of Fairbanks.³

Since the route was important from a military point of view, Richardson then asked the Army to assign a company of engineer troops to Alaska. This company, to be stationed at Valdez, would work under the direction of the Board in improving the military trail and mail route between Valdez, Fairbanks and the Yukon. Richardson promised that the Board would "separate as far as practicable, the duty of the troops from the work of civilians under employment, and would, of course, give consideration to the difference in status, pay, etc., and would endeavor to protect them from unnecessary hardship".⁴

Richardson Organizes the Board

The War Department denied the major's request for a company of engineers, but approved his plans for the organization of the Board and the way in which it would conduct its work. Actually, the Act of January 27, 1905, which established the Board of Road Commissioners for Alaska prescribed the duties of the board in such detail as to make it unnecessary to prepare any regulations. The Act, among other things, provided that whenever more than \$5,000 were to be expended for road or trail work the job had to be advertised and awarded to the lowest bidder. Richardson asked, and the War Department agreed, that the general rules and regulations applicable to contracts and purchases for the War Department "generally shall apply to the contractual undertakings of the board," except that advertisements and proposals were to be submitted in triplicate. One copy was to go to the Returns Office of the Interior Department, one to the Treasury Department, and the third was to be retained by the disbursing officer of the Board. The Board also was to have the authority to accept bids, award work and approve contracts negotiated by the disbursing officer "where the construction by contract is found to be advantageous to the public interest." Copies of contracts were sent to the Assistant Secretary of War who was "to be the medium of communication between the Board and the War Department." In addition to the detailed report to be submitted as soon as work on a road or trail had been completed, the Board pledged itself to render a full report at the end of each season on the total work performed during the preceding working season. Richardson also stated that the annual report would "contain such information in respect to population, conditions, prospective benefits, etc., as will be necessary to acquaint the department with the character and progress of the work." And finally, Richardson asked that the disbursing officer be authorized, with board approval, "to incur and pay the necessary expenses for office hire, and to purchase such office furniture, instruments, and other material as may be necessary for the execution of the work" of the Board.⁵ The War Department approved all of Richardson's requests, and with the organi-

zational details taken care of, the Board members turned to their work.

The Board Members Travel in Alaska in 1905

During the summer of 1905 they traveled widely. Richardson went down the Yukon River via the White Pass, visiting Eagle, Circle, and Rampart. He went up the Tanana River to Fairbanks and from there down to St. Michael, Nome, and Ophir Creek (Council City) districts, and other parts of the Seward Peninsula. Orchard inspected the Valdez Trail and determined what improvements were necessary. Pillsbury examined a section of a road from Whitehorse to Yukon Crossing in the Yukon Territory; he then went to Ketchikan and ordered a survey for a road across a short portage of four miles on Prince of Wales Island from the Cholmondely Sound to Hetta Inlet; he also ordered a survey for a road from Haines Mission up to the Chilkat and Klehini River Valleys toward the international boundary. As if that was not enough for one short season, Pillsbury then went to Valdez in September and crossed Big Delta Pass into the interior, the proposed route of the new trail from the coast. From Fairbanks he went downriver to St. Michael and Nome and left Alaska by ocean steamer late in the fall.⁶

Richardson's Impressions

Richardson estimated that the new town of Fairbanks had a population of approximately 3,000, with another 5,000 working miners on the creeks in the vicinity. The Fairbanks Chamber of Commerce appealed to Richardson to have a wagon road constructed between the camp and adjacent mines, for with the spring breakup, the two stage lines had been forced to suspend operations because the trails had become nearly impassable, to wit:

The town could now only be reached on foot, and it was not uncommon to see miners come in here [Fairbanks] late in the evening, almost exhausted, with their clothing torn and draggled in the mud, after a trip of some thirty miles over a trail from six inches to two feet deep in mud, and from forcing their way through the brush and timber to avoid some of the worse places.⁷

Richardson quickly concluded that Chester W. Purington's 1895 observations on road building in the subarctic had been correct. Purington had remarked that

A serious detriment to the making of a road in Alaska is the thawing of the ground beneath the moss. It has been the universal experience that wherever the moss is cut into, thawing immediately commences, and the trail which was passable becomes a filthy, slimy mass of mud, roots, and broken stone, a difficult route for men on foot, a slow and tiresome road for loaded animals, and an impassable obstacle to any sort of vehicle. In regions further south under temperate conditions, trails frequently are developed into fair wagon roads by much usage. Such development can never take place in any part of the Northwest.

Purington recommended that in sections with poor drainage the moss be left intact, even be added to by material taken from the side ditches, and the surface then be corduroyed with heavy brush or poles. On top of this a covering of gravel would add insulation.⁸

On Richardson's recommendation, the Board then spent a total of \$7,851 in the Fairbanks area, building a six-mile road from Gilmore to Summit, designated as route No. 7, and a trunk road from Summit to the mines on Cleary Creek. The Board of Road Commissioners for Alaska contracted the work since it had no employees of its own.⁹

Major Richardson was particularly concerned with the development of interior and northwest Alaska. This necessitated the speedy development of the Valdez-Fairbanks route, consisting of three separate trails. The first, from Valdez to Copper Center, essentially followed the military trail Abercrombie had built earlier; the second led up the Tanana River from Fairbanks; and the third connected these two from Copper Center to the mouth of the Delta River or to Isabel Pass. Richardson pointed out that the new route would speed mail delivery and thus save time and money. The Board president reported that some work had already been accomplished on trails 4, 5, and 6, consisting primarily of repairs and improvements, such as replacing approximately 3,032 feet of worn-out corduroy with stone ballast and building numerous small bridges over dangerous crossings. He proposed that the dangerous Tanana River be crossed just above the mouth of the Delta River.¹⁰

Richardson arrived in the Nome district on August 22 to survey conditions and assess needs. He described existing forms of transportation, which consisted of a few narrow-gauge railroads -- the Wild Goose route, or the Nome Arctic Railway, which crossed Anvil Creek and extended about sixteen miles across the valley of the upper Nome River; the Solomon River Railroad from the mouth of the Solomon up to the mouth of the East Fork, approximately fourteen miles; and the Council City and Ophir Creek Railroad, running from Council to claim No. 15 Ophir, approximately eight miles. There were a few stagecoaches and numerous gasoline boats and "horse boats," five-ton scows pulled by horses along the banks of the creeks where safe footing could be found or in the stream when it was not too deep. When all else failed, men poled the scows upriver. Residents of Nome petitioned the Board to survey and construct a road leading directly into the heart of the peninsula, a distance of about one-hundred and seventy-five miles. Although too expensive to construct all at once, Richardson believed that short sections should be built where most needed as funds permitted.¹¹

The Board President's Recommendations

Richardson proposed to the War Department the construction of about 300 miles of roads and approximately 1,200 miles of trails, all urgently needed to further economic development. He estimated that it would cost about \$2,500 to \$3,000 per mile of road and approximately \$250 per mile of trail. The Alaska Fund was totally inadequate to meet these needs, and Richardson, therefore, suggested that Congress appropriate \$1 million outright. "Such an expenditure at this time," he argued, "would be of immense benefit to the country in the way of increased production and the opening of new fields." With such an appropriation, the Board could purchase its own animals, tools, and equipment and organize its work on the most economical basis. He explained that the Board had overexpended its \$28,000 budget by \$1,786.61, made necessary by building a permanent organization.¹² The major was an ambitious and capable man. In order to gain success and prestige in

his profession as a military engineer on the frontier, he needed to build his own organization and substantially increase the size of his budget. This, he probably reasoned, would give him the flexibility to build a transportation system in the north which, in turn, would enhance his career.

Back in Skagway at the end of the summer season, Richardson developed a grandiose plan for the development of an integrated railroad and road system. The major briefly described some of the existing railroads, six altogether with relatively short mileages. There was the White Pass and Yukon Railway between Skagway and Whitehorse; and the Alaska Central Railroad which had completed about fifty miles from Seward, intending eventually to reach Fairbanks, some twenty-six miles constructed from Chena and Fairbanks to the mining creeks in the Tanana Valley. Only the Alaska Central and Solomon River Railroads featured broad gauges: all the others were narrow gauge.¹³ Farsightedly, the major stated that "the time has now arrived when the government should in some way undertake to control and promote this [railroad] construction in Alaska, by prescribing a uniform gauge . . . for all roads and . . . by giving substantial aid to some one road which might be regarded as a trunk line for the whole territory." He then suggested a route for such a trunk line. It would start from Haines Mission, proceed up the Chilkat and Tlehini Rivers and go into the interior via an easy pass. Once over the mountains the route led west and north over a rolling plateau country, intersecting the upper waters of the Alsek and White Rivers, to the headwaters of the Tanana, and thence down to Fairbanks. From or near Fairbanks, the route led across the country toward the Rampart mines to about twenty-five miles below the town of Rampart. If necessary, the Yukon River was narrow enough in that spot to be spanned by a bridge, in fact, that was "the only point that I know of for 1,500 miles on the Yukon where a bridge can be successfully thrown across at reasonable expense," Richardson asserted. This then was the proposed main trunk line. "Omitting for the present the gap along the Yukon" between the crossing point and Kaltag, he continued, "the line should be taken up again" at Kaltag and continued to Unalakleet and

thence along the coast. One branch would lead to St. Michael near the mouth of the Yukon, and another to the head of Norton Sound at Council City. At the latter point the main trunk line would connect with the small system or roads already under construction in the area.¹⁴

Richardson then contended that the existing railroads might reject this main trunk line, but he dismissed the potential opposition as unimportant. The most significant advantage of his plan was that it would open the country from a protected harbor in southeastern Alaska. Trade would "develop along natural lines all the way to the westward, instead of going from Seattle . . . in broken lots to southeastern Alaska, Valdez, Resurrection Bay and Nome." In case the War Department rejected the railroad proposal, Richardson suggested that the government consider the construction of a road from Valdez to the upper Tanana and thence to Fairbanks and Rampart. Should this option be adopted, the Major suggested that the "best solution for the question of territorial or other form of government for Alaska would be to separate southeastern Alaska altogether from the rest of the territory and attach it to the State of Washington." For without the railroad, southeastern Alaska would not be tied into the rest of Alaska either commercially, economically, or politically, while the Valdez-Fairbanks-Rampart road would connect the bulk of the territory commercially and politically, and make it a close Seattle trading partner. Richardson also urged the War Department to establish a military post at Kaltag, a key point for the lower Yukon River and the northwestern part of Alaska. This post would easily serve the purposes of Fort Gibbon, St. Michael, and Fort Davis combined. Should the Haines-Fairbanks-Rampart railroad be built, the major thought that the military post at Valdez should be relocated at a point on the upper Tanana where the route crossed the boundary. In that scenario the posts at Haines Mission, Eagle, the upper Tanana and Kaltag would "meet the needs of the whole territory in the way of military supervision."¹⁵

The War Department Response And Board Accomplishments

Much to his chagrin, the War Department did not respond favorably to most of his suggestions, except for approving the construction of a wagon road from Valdez to Fairbanks. Still, the Board could look back on a productive first year. It had directed various reconnaissances and surveys, undertaken some repairs and improvements, built short stretches of road from Haines up the Chilkat River to the Indian villages of the Chilkat Valley, and similar projects in the Fairbanks and Nome districts. The three men agreed that the monies accruing to the Alaska Fund and available for road construction were wholly inadequate to meet even the most immediate and pressing transportation needs of the Territory. Furthermore, the monies from this fund varied and were received at irregular intervals, making it almost impossible to plan ahead and commit funds for long-range projects. The members of the board were united in their opinion that the law which had created the Board of Road Commissioners for Alaska needed to be amended. In November 1905 the Army called Major Richardson to Washington to give a personal report and spell out needed changes. In early 1906 Congress amended the legislation, as requested. As approved, it regularized the collection of license monies and raised the cost of roadwork which could be performed by government forces from \$5,000 to \$20,000.¹⁶ Congress also made a direct appropriation of \$150,000 to be expended at the direction of the Board.

Organization of Work

To carry out the necessary work over such a vast territory, properly supervise it, and protect expenditures, the Board gave much thought to the organization of the office and to the transfer of funds and methods of payment. It divided Alaska into districts, with sub-offices and with a civil engineer as superintendent in charge of each district. These superintendents were to act as disbursing agents for the Board. After the Board had laid out the work, the engineer officer became responsible for seeing it carried out. For that reason he was in charge of the organization of all working parties and for their

immediate direction in the field, as far as possible and consistent with the responsibilities of the other Board members. The disbursing officer, for similar reasons, had great freedom in supervising all office details relating in any way to his responsibility of accounting for funds, property, and records.¹⁷

In order to pay for labor and supplies at distant points, the Board made agreements with local banks to cash checks drawn by the various superintendents. The board had suitable checkbooks printed and distributed. The superintendents were to keep receipts and make a careful accounting. Since there were no banks in some areas where work was performed, it soon became necessary to extend this system to some kind of arrangement with commercial or trading companies. This was done by entering into a written agreement with such companies to furnish supplies and pay the laborers. Eventually, the Board established a system of payment on the overdraft principle. It reimbursed the bank or commercial company each month (or more often if desired) for amounts paid out, paying a negotiated rate of exchange varying from one-fourth to one-half of one percent.

With the framework in place, the Board accepted a 1906 budget of \$230,500, an increase of eight times over the previous year. Of the total, \$80,500 accrued from the Alaska Fund. In addition, Congress also appropriated an extra \$35,000 for a reconnaissance and preliminary survey for a mail and pack trail from the navigable waters of the Tanana River near Fairbanks to the vicinity of Council City on the Seward Peninsula, a distance of approximately 600 miles. The Board hired a civil engineer, J. I. McPherson, who selected a feasible route.¹⁸

The Board's Second Year of Operation

The Board of Road Commissioners for Alaska was not idle during the winter of 1905-06. It shipped rations, forage for the animals, and tools from Valdez and Fairbanks and distributed them in caches along the trail and also constructed a bridge across the Tazlina River; made a reconnaissance of a part of the route from Fairbanks to Rampart; and

flagged 247 miles of exposed trails on the Seward Peninsula. The Board used two assistants and a seven-dog team for flagging -- red flags placed at 50 to 150 feet apart (depending on the terrain) to make winter travel less hazardous by keeping travelers from getting lost.¹⁹ The Board also improved another 40 miles of road, cut 285 miles of new trail, and upgraded another 200 miles already in use. Additionally, it located and surveyed another thousand miles of roads and trails.²⁰

Boards Accept Private Monies

The Board accepted \$7,366.50 which the citizens of Nome had collected to enable the construction of a road from town to the so-called second beach line, about three miles back from the coastline. That, together with what the Board was able to spend, resulted in the construction "of a veritable boulevard, 22 feet between ditches, over which thousands of tons have been transported" where formerly only the lightest wheeled traffic was possible.²¹

Specifically, that season the board accomplished the following location surveys:

<u>Place</u>	<u>District</u>	<u>Distance</u>
Gulkana to Donleys	Valdez	121 miles
Fairbanks to Donleys	Fairbanks	127 miles
Delta to Banner	Fairbanks	13 miles
Donleys to Banner	Fairbanks	51 miles
Fortymile to Eagle	Fairbanks	57 miles
Rampart to Glenn	Fairbanks	30 miles
Hope to Sunrise	S.W. Alaska	39 miles
Preliminary survey	Fairbanks	18 miles
Tolovana-Glenn	?	?
Sundry surveys	Seward Peninsula	19 miles
		<u>475 miles</u>

It constructed and marked the following mileages:

Wagon roads	46.5 miles
Roads maintained and improved	40.0 miles
Sled trails - full width for double sleds	181.0 miles
Trails - cleared half width	81.0 miles
Winter trails flagged	247.0 miles
Bridge over the Tazlina River	
Maintenance of the Bonanza Ferry ²²	

Board Purchases Horses

Early in the construction season the Board decided to purchase its own horses rather than to pay the high price of hire. Team rentals at Nome, Fairbanks, and Rampart cost between \$15.00 and \$18.00 per day. At that price, the Board reasoned, it monthly paid what it would cost to buy a team outright. And if funds permitted in 1907, it intended to purchase its own animals for all projects.²³

Board and Signal Corps Cooperation

In 1906 the Board and Signal Corps began a close working relationship. Wherever practical, the latter changed the route of the telegraph lines to follow the location of permanent trails. This, of course, was to facilitate maintenance. For example, it changed the course of the line to follow the cut-off section from Gulkana to the mouth of the Delta and modified the line between Fairbanks and Rampart and from Kaltag to Unalakleet.²⁴

By the end of 1906 the Board had given form and structure to its organization. Within a couple of years of its establishment, it had become an important federal agency. Major Richardson, as president of the Board, had gained considerable influence in Alaska. For the agency he directed had begun to provide Northerners with the basic framework of a transportation system, and he also controlled a sizable payroll.

The Economic Impact of the Board's Work

Numerous economic benefits quickly resulted from the work of the Board. For example, in the Fairbanks district it had built a 4.07-mile-long road, costing \$2,439 per mile, connecting Summit to Cleary. Some 5000 tons of freight moved over this segment at a reduction of \$10.00 per ton, saving Cleary miners \$50,000 in 1907. A parallel road from Summit to the mines of Fairbanks Creek, 9.22 miles in length and costing \$1,300 per mile, had resulted in a reduction of freight rates by \$20

per ton. The Fairbanks Creek miners had saved an estimated \$40,000 on the transportation of their supplies.²⁵

Improvements in the overland mail trail had resulted in speedier deliveries. In 1906 the first winter mail arrived in Nome on December 5, taking only 49 days from Seattle. The previous year it had not arrived until December 29, and the year before that not until December 31. This represented a time saving greatly appreciated by the citizens of Nome and Seward Peninsula. Ed. S. Orr and Company operated a stage line between Valdez and Fairbanks, a distance of 376 miles. The company held the contract for carrying the winter mail between the two cities. Between November and April, mail and passenger stages left Valdez and Fairbanks weekly. The company set a record for the 1906-07 winter season of six days, 10 hours, and 10 minutes. It usually took nine days to reach Fairbanks and eight going back to Valdez. There were 39 stations along the route, and it took 180 horses, run in relays, to keep the stages moving.²⁶

Richardson Lobbies Congress For Funds

Back in Washington, Richardson's lobbying efforts with Congress paid off handsomely for the 1907 fiscal year when it allotted \$250,000 for his Alaskan projects. Together with \$90,000 from the Alaska Fund, the Board disposed of a record budget of \$340,000.²⁷

More Requests for Road Construction but Inadequate Funds to Meet Them

Unfortunately, requests for road and trail construction from all sections of Alaska poured into Board headquarters "so far in excess of the abilities of the Board to meet, with the funds available or likely to become available in the near future," that Board members thought it wise to issue a circular explaining to Alaskans their policies and limitations. In its circular, the Board drew a distinction between monies accruing from the Alaska Fund and special Congressional appropriations for the "construction and maintenance of military and post

roads, bridges, and trails." The Board had decided to use monies from the former source mainly for local improvements and from the latter for "the location and construction of main trunk lines of communication through the territory, and especially the through mail route from Valdez to the Seward Peninsula." The Board welcomed petitions for projects but requested that each be accompanied by the best information available, such as character of the route desired, tonnage to be transported, number of people to be benefited, the probable permanence of the community, and the approximate cost of the desired undertaking. But the Board also reminded its constituents of Alaska's vast size and that it would take years before all regions requiring aid could even be examined. Actual construction work had to wait for these preliminary reconnoissances. Finally, the Board encouraged monetary contributions from communities in order to stretch funds.²⁸

Annual Report

In his report to the Secretary of War, Board president Richardson differentiated among three different types of construction used. Wagon roads had to accommodate year-round traffic of considerable tonnage. Therefore, they had to be located with suitable grades and be crowned, ditched, and drained and corduroyed or planked where necessary. Winter sled roads had to meet the requirements of winter travel only, therefore no crowning, ditching, or draining was necessary nor was there a requirement for extensive corduroying. They did have to be wide enough through timbered areas and sidehill cutting to permit the passage of double teams, however. In addition, winter sled roads had to have the proper grade for fairly heavy loads, and most of the tree stumps and surface inequalities had to be removed to provide a fairly even surface. Some stretches of winter sled roads had been so well built, in fact, that they even permitted light-wheeled traffic in the summer. Lastly, the dog team and pack trail construction was the least expensive to build. It differed from that of the winter sled road in that it was narrower and had steeper grades and more surface unevenness. By 1907 the Alaska Road Commission had completed about

166 miles of wagon road; 384 miles of winter sled road; 242 miles of dog team and pack trail; 382 miles of flagged winter trail and built three river bridges and installed three ferries. The following table shows, in detail, the wide regional distribution of work accomplished as of 1907.

The Board had to cope with wide variations in construction costs in various regions of Alaska. During the 1907 season, for example, the cost of labor had ranged from \$2.50 to \$5.00 per day. Board was provided and subsistence costs ranged from slightly more than \$0.50 per day in southeastern Alaska to \$3.00 per day in the Interior. The higher expenses reflected the inadequate transportation system: southeastern Alaska, for example, could rely on competitive and cheap ocean freight rates. Similarly, wages differed significantly, again reflecting the cost of living in the different regions. Superintendents, locating engineers, foremen, and assistant foremen received anywhere from \$150 per month to \$10 or more per day. The cost of hiring work animals also varied greatly ranging from \$10 per day for a four-horse team including feed to \$13 per day for a single horse and no feed. Not surprisingly under these circumstances and with the added diversity in climatic, timber, and soil conditions, mileage costs of construction ranged from a low of \$100 to a high of several thousands of dollars per mile. And although considerable economy had been achieved with the purchase of four road machines, each drawn by a team of six to eight horses and used in ditching and sidehill grading, it still cost an average of approximately \$2,200 for each mile of wagon road built. Winter sled roads cost \$250 and pack trails \$100 per mile.³⁰

The Board a Smoothly Working Organization in 1907

By 1907 the Board had become a smoothly working organization, but as with any growing entity emerging complexities called for clarifying directives. Thus in circular No. 2 issued May 6, 1907, it stated that superintendents of districts and disbursing agents of the Board were required "to furnish bonds for the faithful performance of their

DISTRIBUTION OF WORK AND MILEAGE COMPLETED DURING SEASON

Wagon Roads

Name	Construct- ed and im- proved to Nov. 1, 1906	Construct- ed Nov. 1 1906 to Oct. 1, 1907	Total con- structed and im- proved	Length previously construct- ed im- proved year
	Miles	Miles	Miles	Miles
Portage road.....	2.00	1.96	3.96	0.31
Haines-Pleasant Camp.....	3.04	9.00	12.04	-----
Valdez-Copper Center.....	-----	.71	.71	-----
Gilmore-Summit.....	6.00	-----	6.00	-----
Summit-Cleary.....	4.73	a1.33	a6.06	-----
Summit-Fairbanks.....	9.22	a1.33	a10.55	-----
Fox-Dome.....	6.88	a1.00	a7.88	-----
Ridge-Vault.....	-----	a1.50	a1.50	-----
Siding-Esther.....	-----	a6.00	a6.00	-----
Rampart-Big Minook.....	4.25	2.00	6.25	1.00
Eagle-O'Brien.....	-----	8.75	8.75	-----
Circle-Birch.....	-----	9.50	9.50	-----
East Fork-Council.....	31.00	-----	31.00	-----
Nome-Fort Davis.....	2.10	-----	2.10	-----
Nome-Dexter.....	7.00	3.00	19.00	-----
Anvil-Glacier.....	-----	.80	.80	-----
Penny River.....	-----	.80	.80	-----
Cripple River.....	-----	.80	.80	-----
Deering-Ininachuck.....	-----	.75	.75	-----
Candle Creek.....	-----	2.00	2.00	-----
Mile 35, Sunrise-Hope.....	-----	37.00	37.00	-----
Bear Creek.....	-----	1.50	1.50	-----
Total.....	76.22	89.73	165.95	1.31

a Estimated: reports not yet received

b Does not include 65 miles sled road from Washburn to Donleys, replaced by new Delta Cut-off.

DISTRIBUTION OF WORK AND MILEAGE COMPLETED DURING SEASON (CONTINUED)

Sled Roads

No.	Name	Construct- ed and im- proved to Nov. 1, 1906	Construct- ed Nov. 1 1906 to Oct. 1, 1907	Total con- structed and im- proved	Length previously construct- ed im- proved year
	Valdez-Copper Center.....	24.75	-----	24.75	5.75
4a	Marshall Pass.....	.75	-----	.75	-----
6	Copper Center Delta.....	6.00	43.00	43.00	7.25
6a	Delta River.....	25.00	.50	25.00	-----
5b	Delta Cut-off.....	-----	52.00	52.00	-----
5	Fairbanks-Washburn.....	62.00	-----	62.00	62.00
5a	Washburn-Tenderfoot.....	4.00	15.00	19.00	4.00
16	Cleary-Birch Creek.....	-----	b34.00	b34.00	-----
17	Fairbanks-Hot Springs.....	-----	b48.00	b48.00	-----
18	Hot Springs-Fort Gibbon...	-----	34.00	34.00	-----
11	Eagle-O'Brien.....	-----	7.25	7.25	-----
22	Eagle-Seventymile.....	-----	15.00	15.00	-----
34	Canyon Creek-Walkers Fork.	-----	2.50	2.50	-----
11a	Jack Wade-Steel Creek.....	9.90	-----	9.90	-----
	Total.....	132.40	251.25	383.65	79.00

Trails

4	Valdez-Copper Center.....	2.00	-----	2.00	-----
6	Copper Center-Delta.....	74.00	-----	74.00	6.00
(5)	Washburn to McCarty.....	30.00	-----	30.00	-----
16	Cleary-Birch Creek.....	-----	a30.00	a30.00	-----
19	Cut-offs on Yukon.....	-----	36.50	36.50	-----
35	Nome -Unalakleet.....	-----	52.00	52.00	-----
	Unalakleet-Kaltag.....	17.00	-----	17.00	-----
	Total.....	123.00	118.50	241.50	6.00

a Estimated: reports not yet received.

b Does not include 65 miles sled road from Washburn to Doneleys, replaced by new Delta Cut-off.

c Footnote 29

duties, when deemed necessary by the Board of Road Commissioners." The bonding, however, was not to be charged against the salaries of such employees but was to be paid from Board funds. A day later, circular No. 3 instructed superintendents of districts and foremen in charge of working parties to notify all employees that the Board did assume responsibility for "injuries or sickness of men so employed." The Board modified this statement, however, by adding that in case of serious illness or injury through unavoidable accident it would procure a surgeon or physician without charge in order to prevent loss of life. If necessary, it also would transport victims, free of charge, to the nearest suitable medical or hospital facility.³¹

On May 8, circular No. 4 regulated pay periods and No. 5 specified that all roads and trails located, constructed and maintained by the Board were to be 60 feet wide, 30 feet on each side of the center line except in special cases where a lesser width might be employed. There was to be no encroachment on this 60 feet of right-of-way unless the Board had granted prior authority.³²

Richardson Lobbies Successfully for Special Appropriations

In the meantime, Richardson continued to lobby successfully for special congressional appropriations. For the fiscal years 1908 through 1911, Congress provided \$244,857.18 (1908), \$236,674.97 (1909), \$237,498.50 (1910), and \$100,000 (1911). Together with monies from the Alaska Fund, this gave the board budgets for those years as follows:³³

<u>1908</u>	<u>1909</u>	<u>1910</u>	<u>1911</u>
\$365,629.90	\$383,646.89	\$340,396.79	\$266,777.95

1911 Annual Report

In 1911 the Board reported that a total of 759 miles of wagon roads, 507 miles of winter sled roads, and 576 miles of pack trails had been built. Additionally, every year the Board had staked several hundred miles of winter trails over treeless and exposed sections of the territory for the guidance and safety of travelers during storms.

It also had continued its program of constructing bridges and installing ferries. The Board once again called attention to its wagon roads and explained that this designation had been applied in a restricted sense in Alaska, and they certainly did not meet the standards of those found in the contiguous United States. Alaska's wagon roads, the Board explained, were designed to be good country roads capable of accommodating year-round traffic of considerable tonnage. They had been located with appropriate grades, been crowned, ditched, and drained, and corduroyed or planked where necessary. Wherever soil quality permitted, ordinary graded earth roads were built. In areas with poor soil conditions, where an ordinary earth road would not support the traffic, the board had put down a light corduroy of small spruce trees covered with several inches of earth. In fact, most of the wagon road mileage constructed consisted merely of such roads and therefore rutted badly during prolonged periods of rain. While the Board had worked in most sections of the territory, it had constructed the best system of local roads in the Fairbanks and Nome mining districts. This had been accomplished, in part, because of the substantial financial assistance local residents had rendered.

Congressional Legislation

In 1904 Congress had passed legislation that required all able-bodied Alaska males between the ages of eighteen and fifty who resided outside incorporated towns to work two days each year on the public roads or, failing to do so, furnish a substitute or pay eight dollars in cash. Gradually, the court commissioners had made the law effective, and by 1911 it had yielded the equivalent of approximately \$100,000 in labor and money payments. In fact, roads were in such good shape in the Fairbanks mining district in the summer months that automobiles carried both passengers and freight between the town and the creeks.³⁴

Board Plans Based on Population

By 1910 census records showed that Alaska's interior, principally Fairbanks and the Tanana Valley, had a total population of 13,064 topped only by a population of 15,216 in southeastern Alaska. The Board members agreed that it was of the utmost importance to connect this thriving mining district with the coast at Valdez. Construction of the Valdez-Fairbanks wagon road would continue on a priority basis. Already, more than half the total wagon road mileage in the territory had been constructed along this route. A branch had been added by building some 90 miles inland at Willow Creek and from there to Chitina on the Copper River and Northwestern Railroad, which connected with Cordova. In short, the Board could point to substantial accomplishments in 1911. Its system of wagon roads, winter sled roads, and pack trails had reduced the expense of moving freight, made possible speedy and regular mail service to interior and northwestern Alaska, and increased the safety of travel in general.³⁵

FOOTNOTES

1. Dumas Malone, ed., Dictionary of American Biography, vol. 15 (New York: Charles Scribner's Sons, 1935, p. 576.
Richardson was promoted to Captain on April 26, 1898; to Major on April 7, 1904; Lieutenant Colonel in 1908; and Colonel in 1914; and left Alaska in 1917, after he became a Brigadier General in the National Army. In March 1918, Richardson assumed command of the 78th Infantry Brigade, 39th Division and arrived overseas at Brest, where, on September 3, in time to take part in the closing battles of World War I. Next he commanded the American Forces at Murmansk in northern Russia, arriving there early in April 1919. In October he returned to the United States, and with the mustering out of the National Army he was returned to the rank of Colonel and retired on October 31, 1920. He died in Washington on May 20, 1929, at sixty-nine years of age.
2. 1905 Report of the Board of Road Commissioners, pp. 4-5.
3. Richardson to the Military Secretary of the Army, May 25, 1905, R. F. 94, Records of the Adjutant General's Office, 1780's to 1917, AGO Doc. File, various files pertaining to Alaska, N.A.
4. Ibid.
5. Judge-Advocate General to the Acting Secretary of War, June 15, 1905, RG 94, Records of the Adjutant General's Office, 1780's to 1917, AGO Doc. File, various files pertaining to Alaska, N.A.
6. Ibid., pp. 7-8.
7. Ibid., pp. 10-11.
8. Ibid., pp. 13-14.
9. 1905 Report of the Board of Road Commissioners, pp. 15-17.
10. Ibid., pp. 15-19.
11. Ibid., pp. 23-27.
12. Ibid., pp. 29-30, 44-45.
13. Richardson to Major General F. S. Ainsworth, October 18, 1905, Confidential, R. G. 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.

14. Ibid.
15. Richardson to Major General F. C. Ainsworth, October 24, 1905, R.G. 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska.
16. 34 Stat. 192.
17. War Department, Report of the Board of Road Commissioners for Alaska, 1913, (Washington: GPO, 1914), p. 8.
18. Board of Road Commissioners, Report upon the Construction and Maintenance of Military and Post Roads, Bridges, and Trails, Alaska, 1906 (Washington: GPO 1907), pp. 61, 2-3.
19. Ibid., pp. 3-6.
20. Ibid., P. 8.
21. Ibid., P. 9.
22. Ibid., pp. 20-21.
23. Ibid., pp. 10, 60.
24. Ibid., pp. 10-11.
25. "Road Building in Alaska," Alaska-Yukon Magazine, March 1907, pp. 20-21.
26. Report of the Board of Road Commissioners for Alaska to the Secretary of War, 1907, in Annual Reports, War Department, Fiscal Year Ended June 30, 1907 (Washington: GPO, 1907), pp. 5-6;"Ed. S. Orr & Company's Stage Line," Alaska-Yukon Magazine, June 1909, P. 190.
27. 1907 Report of the Board of Road Commissions for Alaska, p. 6.
28. Ibid., pp. 7-8.
29. Ibid., pp. 10, 9.
30. Ibid., pp. 11-15.
31. Circulars No. 2 and 3, May 6 and 7, 1907, RG 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.
32. Circulars No. 4 and 5, May 8 and July 10, 1907, RG 94, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, N.A.

33. U.S. Department of the Interior; Office of the Territories, Alaska Road Commission, Annual Report for the Fiscal Year Ended June 30, 1956 (Juneau, Alaska: August 31, 1956), p. 43.
34. Sidney Charles, "Progress of Road Building in Alaska," Alaska-Yukon Magazine, January 1911, pp. 38-40.
35. George W. Rogers and Richard A. Cooley, Alaska's Population and Economy: Regional Growth, Development, and Future Outlook, Vol. II, Statistical Handbook (College, Alaska: University of Alaska, Institute of Business, Economic, and Government Research, 1963), p. 28; Sidney Charles, "Progress of Road Building in Alaska," Alaska-Yukon Magazine, January 1911, pp. 38-40.

CHAPTER THREE

WILDS P. RICHARDSON AND JAMES WICKERSHAM

It was not surprising that Richardson was called upon by members of the executive and legislative branches of the federal establishment for advice on matters affecting the North. At the end of the construction season each year, the War Department recalled him to Washington where he served in various capacities between November and April. In the course of his work Richardson came into contact with many influential lawmakers and bureaucrats, and over the years he made friends in high offices.

Richardson had known James Wickersham for a considerable period of time, first as a federal judge and then as Alaska's newly elected delegate to Congress. Wickersham took his seat in the House of Representatives in March of 1909. While running for the office, he had promised territorial voters that he would get through Congress a bill allowing them to elect their own legislature and also granting them a greater degree of home rule. As promised, the new delegate submitted his measure on June 7, 1909. It was referred to the House Committee on Territories, of which he was a member, for hearings and consideration. Unfortunately for Alaskan hopes, however, the new president, who had served as governor-general at Manila in the Philippine Islands, favored the creation of a government similar to that with which he had worked in the Islands. Ex-Governors Wilford Hoggatt and Walter E. Clark as well as Major Richardson supported the president's plan, as did numerous federal bureaucrats and lobbyists for corporate interests with financial investments in the Territory. If successful, Taft's scheme would have placed Alaska under the control of the Bureau of Insular Affairs in the War Department.¹

Conflict Develops Between the Two Men

Wickersham violently opposed the president's plan and quickly attacked those who supported it. He was particularly annoyed with

Richardson because he thought that the Major had played a major part in drafting the offending legislation. It was not long before the two men had become implacable enemies. In early 1910, for example, the delegate complained to the Secretary of War that, contrary to presidential orders issued the previous year directing territorial officers to spend their time at their duty stations rather than in the nation's capital, Richardson had "arrogated to himself the duty of controlling general legislation for Alaska in a way which I decidedly resent." Richardson backed the creation of an Alaska Railway Commission which, Wickersham charged, would give away valuable coal lands to the Alaska Syndicate, a combination of the J. P. Morgan and Guggenheim fortunes. In Alaska, the principal mining venture of this organization consisted of the Kennecott copper mine. In order to tap this deposit it had begun construction of the Copper River and Northwestern Railway. It controlled steamship transportation and a major part of the salmon canning industry. Most importantly, the delegate had early clashed with the Alaska Syndicate and subsequently run on an antisyndicate platform in his first campaign.²

Richardson Supports Beveridge Bill

Then there was the major's support of the Beveridge bill, which provided for the appointment of a legislative council of nine members with broad powers of legislation. There would be an Attorney General, a Commissioner of the Interior, a Commissioner of Education and Health, and a Commissioner of Mines, who, together with the governor and four other persons appointed by the president, made up the legislative council. Beveridge had introduced his bill on January 18, 1910, but Wickersham had not learned of it until the next day. He immediately requested a hearing before the Senate Committee on Territories. In his testimony the delegate argued vehemently against the measure, and he and Richardson exchanged sharp words. After leaving the committee room on January 20, Wickersham related that Richardson met him in the corridor and in "an angry tone he threatened me for what I had said

before the Committee of the Senate about his connection with these bills and said that only his position as a Major in the Army, and my position as a Delegate in Congress protected me."

Wickersham rejected the whole scheme but was particularly offended by one provision of the measure which allowed that one or more of the commissioner positions could be filled by Army officers. If an officer should be appointed Commissioner of the Interior, he would simultaneously also be the chairman of the Board of Road Commissioners for Alaska. The delegate feared that Richardson had included this section so as to become the Commissioner of the Interior, a member of the Legislative Council, and the Alaska Railway Commission and thereby make himself a very powerful individual indeed, becoming "the dispenser of franchises, privileges, and concessions of the public resources of Alaska." Wickersham accused Richardson of favoring the Alaska Syndicate, thereby betraying the trust of the miners, businessmen, newspapers, and most Alaska residents opposed to placing control of the Territory's resources "into the hands of an appointive Military Commission" of the Alaska Syndicate. Wickersham claimed to represent all the people of Alaska, "excepting only one or two big interests which hope thus to control the great undeveloped resources of the Territory, as well as its government, through the channel."³

Wickersham not only protested the major's conduct to his superiors, he also asked that the officer be sent back to Alaska to perform the duties of his job instead of lobbying in favor of legislation which the delegate opposed as being "inimical to the interests of the people of that Territory." In fact, it seemed as if Wickersham's animosity toward Richardson had gotten the better of him and clouded his judgment. The Major, as alleged, was not an Alaska territorial officer subject to the supervision of the Secretary of the Interior, but rather served under the direction of the Secretary of War, who had ordered him to Washington. Richardson, however, denied any lobbying for the Alaska Railway Commission. He stated that he had merely been asked to supply some ideas involving coal lands and that he had done. In fact, the so-called bill was merely a rough draft. Richardson stated that he

"would not have done even that much had I not been authorized by the President, when Secretary of War, to follow up the railroad developments in the Territory, and keep him advised as to the feasibility and necessity of aid by the Government in such construction." The allegation that Richardson was in large part responsible for the Beveridge bill was pure nonsense. The Major stated, however, that "my connection with such a proposed government would not do any more injury to Alaska than Mr. Wickersham's presence here as a Delegate; nor do I think I would have a smaller percentage of the whole peoples' support."⁴ Richardson told his military superiors that the delegate had received a mere 3,802 votes out of a total of 9,625 cast in the last election, divided among five candidates. The major disclaimed any connections with the Alaska Syndicate and in turn accused the delegate of making statements "wholly false as to fact, malignant in motive, and unwarranted from what he knows of my work in the Territory and from my past relations with himself." After considering all the facts, the Secretary of War rejected the delegate's complaints and held that since Wickersham had made the remarks to which Richardson had objected before a Senate committee rather than on the floor of the House under his privilege as a member of that body, the Major had acted properly under his rights and privileges as a citizen.⁵

Wickersham Persists in his Quarrel with Richardson

Wickersham, however, was a contentious and scrappy individual and not to be deterred in his quest for substantially reducing Richardson's influence with the executive branch and Congress. He drew up a long list of allegations and complaints designed to demonstrate Richardson's long history of lobbying before Congress. The delegate used selective passages from various hearings to implicate and discredit Richardson. As early as 1904, for example, even before taking up his road work, the officer had offered to come to Washington "to lay the facts before the Secretary of War and before the proper committees of Congress." As a result of this offer, Richardson had "been ordered by the Secretary to

report to Washington in order to go before the committees and represent the needs of Alaska." Senator Knute Nelson, one of the members of the Senate subcommittee which had visited Alaska in 1903 where he had become acquainted with Richardson, praised the latter for his great assistance in getting special appropriations from the Military Committees for the Alaska road work. In fact, Nelson had stated, "He and I have frequently conferred about Alaskan matters . . . and I have found him very helpful. He has given me lots of valuable information about Alaska; and I think he has been very helpful in securing not only appropriations but other legislation." In his very lengthy indictment of Richardson, the delegate cited innumerable alleged wrongdoings and finally reiterated his demand that the Secretary of War remove the major from Washington.⁶

Wickersham was unfair in his continuing attacks on Richardson, but they did serve to gain the attention of Alaskan newspapers and citizens and focus them on the inadequacies of the Beveridge bill. And although Richardson had, in fact, made several recommendations which had been incorporated in the draft legislation, it had been President Taft who had proposed the peculiar provisions of the Beveridge bill. On December 11, 1909, the president had stated that

Senator Beveridge is willing to father such a bill, and I am anxious to have it embody the features that I suggested. The truth is that what you might do is to take the Philippine Act of 1902 and go through it and strike out the things that are peculiarly applicable to the Philippines and insert those things that you may know from Richardson or otherwise in reference to Alaska. When you have it, send it over to me and I will send it to Senator Beveridge and he will shape it with his knowledge of existing conditions in Alaska and introduce it, and I will see what I can do to help it through.⁷

Wickersham's Dislike of Richardson Increases

In the meantime, Wickersham's dislike of Richardson increased, and he became almost paranoid about the latter's intentions. To a constituent he suggested that the Major assisted "his friends the Guggenheims to defeat me for reelection. I shall expect you to offset the Major's in-

fluence. . . and assist me to be reelected for the purpose of defeating his appointive military legislative bill with the Major at the head of it to control Alaska in the interests of the big corporations." The delegate concluded that "we have got to fight to protect the Territory from this band of grafters....."8

Wickersham's Hopes

What Wickersham clearly hoped was that his continued barrages against Richardson, tainting him with allegations of ties to the Alaska Syndicate, would eventually ruin his military career by making him so controversial that the Army would decide to replace him. In a public speech in Fairbanks, Wickersham continued his harangue against the President of the Board of Road Commissioners for Alaska. He asserted that the Major had "assisted in drafting the Beveridge bill, so that he might be appointed in charge of the railroad board" and that "the bill was plainly intended for the benefit of Major Richardson, and the fattest job was for the Major." Not only was Richardson self-serving, Wickersham charged but a coward as well because although there had been two foreign wars since he had been in Alaska, he had served in neither. What Wickersham did not know was that Richardson had applied for duty in the Philippine Islands in 1899 while stationed at Fort Egbert, Alaska, but had been refused because the Army needed him in the north. It was perhaps an editorial in the Fairbanks Daily Times which accurately summarized Wickersham's vendetta: "And now comes a politician, who, having been elected to attend to the representation of Alaska in Congress, abuses his position to vent a petty spite upon Major Richardson."9

Richardson learned of the delegate's unremitting attacks against him while working at Kaltag on the Yukon River. He was desperate and helpless because he did not command the attention of the newspapers like the delegate did. He reiterated that he had merely followed orders when providing background information for the Beveridge bill. "His outrageous assault upon me," the Major stated, "was unjustified by any single act of mine, official or personal, toward himself or the people of Alaska. It

was as unexpected as it was vindictive and malevolent and it is now continued. . . with no restraint of moral responsibility, respect for the truth, or sentiment of common decency."¹⁰

Wickersham gained reelection in 1910 after having waged a campaign in which he criticized the absentee-owned fisheries for not paying their share of taxes to the Territory, assailing the Alaska Syndicate, and attacking President Taft's scheme for governing Alaska and advocating his version of home rule for the North.

The Misfortunes of Lieutenant Sam C. Orchard

The delegate had not forgotten Richardson and the Board of Road Commissioners for Alaska. In the summer of 1911 he received information from constituents which informed him of a local rumor that Lieutenant Sam C. Orchard, the disbursing officer of the Board, was short in his account. In fact, one of Wickersham's informants labeled Orchard an "embezzler to the extent of \$17,000" from the Road Commission Fund. Another told about the Lieutenant's "heavy drinking for the last three years and his spending large sums of money in politics attempting to defeat my [Wickersham's] election last August." And although his informants had no factual information which might throw light on the situation, Wickersham asserted that as a public official it was his responsibility to bring this information to the attention of the War Department so that an investigation might be undertaken. The delegate was happy when he learned that such a probe already was underway because the War Department had received similar information earlier. By October 1911, a court martial had been convened, and Orchard was ordered under guard to Fort Lawton, Washington, to await the actions of the higher authorities.¹¹

Who was this First Lieutenant Samuel Chandler Orchard? He was born on August 31, 1868, in Fayette County, Texas, and received a commission as a First Lieutenant in the First Texas Volunteer Infantry on May 14, 1898. He served as inspector of a rifle range and as a quartermaster but did not participate in any of the battles during the Spanish-American War. On

April 18, 1899, Orchard was honorably mustered out but was reluctant to return to a wholesale grain and hay business. He had taken a liking to the military life and applied for an appointment in the regular Army but failed his examination on August 17, 1901, in San Antonio, Texas. Despite this, the review board recommended that he be considered eligible for appointment. The Army commissioned him a second lieutenant on November 7, 1901, retroactive to February 2, 1901. Orchard served at Fort Sam Houston, Texas, at the Presidio in San Francisco, California, and at Fort Thomas, Kentucky, where he performed the duties of battalion quartermaster, headed the commissary, and was in charge of the prisoners. In May 1904 the Army ordered him to Fort Liscum at Valdez, Alaska. From July 1, 1904, to March 1, 1905, Orchard supervised the construction of public buildings at the Fort and then was appointed disbursing officer for the newly created Board of Road Commissioners for Alaska.

Efficiency reports in subsequent years by his superior, Major Richardson, rated Orchard highly. In 1906, for example, he stated that Orchard's attention to duty and his professional zeal were excellent and that he seemed to have a good business ability. In 1908 he again remarked that Orchard had shown a special fitness for detail in the pay department as disbursing officer for the Board of Road Commissioners for Alaska. In 1910 Richardson again gave his subordinate high marks, noting that he was qualified for his position, should be entrusted with important duties and had performed his responsibilities as disbursing officer well.

Orchard's World Collapses

In 1911, Sam Orchard's world suddenly collapsed around him when the Army convened a general court martial for his trial on charges of embezzlement at Fort Wm. H. Seward, about one hundred miles north of Juneau near Haines Mission on Lynn Canal. At Orchard's request, the court martial adjourned for ten days to enable him to prepare his defense. Orchard's civilian lawyer, J. M. Cobb, had asked for a postponement of the trial for at least 30 days to enable him to hire an expert

accountant and have the latter examine "the great mass of papers, vouchers and documents on file in the Road Commission's office" which would enable him to prepare the defense. This was denied, however, and the court martial reconvened in Valdez in early October, 1911.¹²

Richardson was acutely embarrassed about the scandal, coming as it did on top of Wickersham's relentless criticism of his organization and of himself. This case, he reasoned, would only furnish the delegate with further ammunition against the Board of Road Commissioners for Alaska. What made matters worse, in Richardson's eyes, was that Orchard told friends that all of his troubles had arisen because the president of the Board had "turned against him and that it was due to politics." Then, according to Richardson, instead of preparing his defense, the accused and his civilian attorney proceeded to try their case in advance on the streets of Haines, Skagway, Juneau, Cordova, and Valdez, contending that an innocent man was being persecuted and that they possessed the evidence to show it. Additionally, the two made threats and insinuations against the president of the Board and against Board employees who were compelled in the performance of their duty and under oath before the court to give testimony in the case.¹³

In the meantime, Orchard had made several sworn depositions. He stated that he had been a member of the Board of Road Commissioners for Alaska from April 15, 1905, to July 17, 1911, and was familiar with the details of the work carried on by the commission during this time period. In early 1907, he continued, the Board agreed to purchase all necessary supplies from the Northern Commercial Company at Eagle, Circle, and Tanana on the Yukon River. In return, the Northern Commercial Company agreed to furnish the funds for payment of the employees of the Board "at such stations and be reimbursed by United States depository checks, sent to the headquarters office of the company at San Francisco." Orchard added that bids were called for, but that the Board knew that only the Northern Commercial Company was capable of advancing funds to the Board of Road Commissioners for Alaska. The agreement with the Northern Commercial Company had been made by members of the Board before Orchard had been informed, but as secretary of that organization he drafted the

terms. In the latter part of 1907 the Board expanded the agreement with the Northern Commercial Company and charged the latter with performing the banking business for the Board in Fairbanks.¹⁴

Orchard Accuses Richardson

Orchard also accused Richardson of involving himself actively in partisan politics. In the summer of 1910, Richardson supported the candidacy of Ed S. Orr for delegate to Congress. Orr was an employee as well as business associate of the Northern Commercial Company, the Katala Company, and "other allied corporations in said district." Orchard swore that "he had [the] authority of the Secretary of War to use every resource within his power" to defeat the reelection efforts of Delegate James Wickersham. Orchard continued that Richardson frequented saloons, drank heavily and campaigned for Orr. On several occasions Orchard reminded the president of the Board that such conduct was unbecoming for an Army officer -- but to no avail. In fact, on one occasion Richardson stated that he would help defeat Wickersham even "if he had to drink his heart's blood."¹⁵

A number of Valdez citizens testified that members of the military court martial had been observed in various stages of public drunkenness. Colonel Richardson had often participated in these drinking bouts, and he and members of the court, most inappropriately, had publicly discussed the merits of the Orchard case. In one instance, members of the military court dined in one of the restaurants in Valdez. During the dinner one of the officers loudly observed that "why, of course, he [Orchard] is guilty." Another replied that there was "nothing in the evidence so far to justify the assertion," whereupon the first speaker observed that "it doesn't make any difference about the evidence. He is guilty, for it would be impossible to lose that amount of money, or to be mistaken to that extent."¹⁶

Board Kept No Books

During the court martial it developed that the Board actually kept

no books. Its accounting system consisted of checks and vouchers. The office retained duplicates of the vouchers and check stubs. The original vouchers and checks were sent to Washington to the Auditor's Department. If the checks drawn and the vouchers forwarded corresponded, the auditors approved the accounts. The War Department deposited the funds Congress appropriated in the U.S. Depository in Seattle to the credit of the disbursing officer of the Board of Road Commissioners for Alaska. Because Alaska had insufficient banking facilities, the War Department had authorized the disbursing officer to draw money upon checks and retain it in his personal possession to be accounted for as cash. From 1905 until 1910 no inspector ever examined Orchard's accounts, although expenditures during this period amounted to more than \$1.5 million. In May 1909 an Army auditor inspected Orchard's accounts, closing his examination on May 28, 1910. He found that the accounts were correct to a cent.¹⁷

Sidney L. Carter, Chief Clerk Of The Alaska Road Commission

In 1909 one Sidney L. Carter became the chief clerk of the Board. The government decided to prosecute Orchard on the basis of the evidence supplied by Carter and Richardson. Carter and the Board's superintendents were allowed to draw checks on the Northern Commercial Company where they were carried as an overdraft, and then the U.S. Depository in Seattle reimbursed the Northern Commercial Company or the particular bank doing business with the Alaska Road Commission.¹⁸

Wickersham and His Affidavits

In the spring of 1911 Delegate Wickersham received affidavits alleging that the Alaska Road Commission superintendents along the Yukon stole money from the organization. Wickersham presented these affidavits to the War Department which, in turn, informed Richardson of the charges. On his way back to Alaska, the president met Carter in Seattle and Richardson informed Carter of the allegations. Carter thereupon apparently charged Orchard with embezzling funds. Both men arrived in Valdez in

April, 1911, but did not inform Orchard of their suspicions until May 14 of that year. Then they accused Orchard of having embezzled approximately \$12,500 which should have been paid to the Northern Commercial Company in 1909. Orchard denied the accusations and demanded an inspection. Richardson, however, urged his subordinate to try and straighten up the matter and suggested that Carter be asked to find out where there was any shortage. Richardson further persuaded Orchard to make good any shortages until a full investigation of the accounts could be made, ostensibly to prevent official charges being brought against Orchard. Thereupon Orchard wired the Northern Commercial Company asking that he be given time to find the mistake and that, in the meantime, he "would pay any shortage that was found to exist." That was a foolish move on Orchard's part because it seemed like an admission of guilt. In June, 1911, an inspector arrived in Valdez and shortly thereafter a general court martial was appointed.¹⁹

Orchard's Lawyer, J. M. Cobb, Disenchanted With Military Justice

Orchard's lawyer, J. M. Cobb, quickly became disenchanted with military justice. Cobb had seen "a great deal of political courts" during his fourteen years residency in Alaska, courts whose decisions were entirely controlled by matters extraneous to the record. He exaggerated for effect, however, when he stated that he had never seen "anything which was as scandalously misconducted" as the court which tried Orchard. Cobb had gained the impression that the members of the court martial from the very beginning held the opinion that the case was a fight between Richardson and the accused. Throughout the trial that aspect of the case was publicly discussed, and various members of the court martial stated publicly that Richardson "was the biggest man in Alaska and that he had the strongest pull with the president of any army officer." Most members of the court drank and caroused with Richardson almost every night during the trial. In fact, one morning in early October during the introduction of evidence Captain Simonds, a member of the court martial, "fell out of his seat in a drunken stupor" forcing a court recess until he could be revived.¹⁹

Simonds, an alcoholic, had been carousing with Richardson the night before until 4:00 in the morning.

Wickersham Delighted at Richardson's Discomfiture

Wickersham, of course, was delighted at the discomfiture of Richardson, and in his Alaska Day speech in Fairbanks on October 18 he reminded his listeners that nearly two million dollars had "been spent on public roads in the territory of Alaska; and yet they say you can't get over to Valdez in an automobile." Even worse, the delegate continued, "your newspapers don't tell you that they have prosecuted Sam Orchard. . . down at Valdez and Haines for the embezzlement of \$17,000 that you paid into the Alaska Road Fund. They don't tell you how that money has been wasted, embezzled, and thrown away." In comparison, the Canadian government had expended \$140,000 to build a perfectly good road, some 340 miles in length, between Whitehorse and Dawson. It only cost \$10,000 annually to maintain, and the Canadians ran automobiles over it. In contrast with the Board of Road Commissioners for Alaska, the Canadians had not wasted their funds. "They didn't build three and four parallel roads. The road business up there wasn't ruled by incompetency as it is here." The Board should not receive another dollar, Wickersham declared, and instead the funds should be entrusted to men "who will go out there and build roads and who will not draw blue prints and maps."²⁰

Court Martial Finds Orchard Guilty

In the meantime, the court martial found Orchard guilty of having embezzled \$16,731.28 and sentenced him to be dismissed from the Army, imposed a fine in the amount of the embezzled funds, and directed that he be imprisoned for five years at hard labor. President Taft reviewed Orchard's sentence and reduced it to two years imprisonment at hard labor because of the time Orchard already had spent in solitary confinement at Fort Lawton, Washington. Protesting his innocence, he commenced his prison term at the federal penitentiary at Leavenworth, Kansas.²¹

In retrospect, the evidence suggests that the court martial did not render an impartial judgment. Orchard became a victim of the lax book-keeping procedures the Alaska Road Commission employed.

Richardson To Be Relieved Of His Duties

But before the court martial had reached its verdict in February, 1912, the beleaguered Richardson received notification from the Secretary of War that he would be relieved of his duties not later than November 1 of that year. Secretary of War Henry L. Stimson informed Richardson that the department had adopted a new policy designed to return to duty army officers who had been on special assignments for four or more years and that the reassignment was not connected to his troubles in Alaska.

Richardson was mortified by this latest turn of events because it would appear to vindicate his detractors. He hastily explained to his superiors that his relief "would naturally give rise to conclusions in certain quarters as to the integrity of my work in Alaska, where I have spent the best years of my life, unjustified by the facts, and which constitute a grave reflection upon me professionally." He reminded his superiors that the president himself had initially directed his appointment as presiding officer of the Board, presumably because of his previous experience in Alaska. "The duty came to me unsought," he asserted, "and, as I foresaw, fraught with many difficulties of climatic and local conditions entirely out of the ordinary....." Because of insufficient funds, the board had been unable to respond fully to the transportation needs of "a restless and impatient population" and had been subjected to some harsh criticism. Delegate Wickersham had seized upon this criticism "to bolster up in part an unwarranted and malevolent attack, for political purposes. . . aimed directly at myself, but indirectly and persistent since, in the effort to discredit the War Department and Administration generally in the Territory." There also was the fact that two of the three officers on the Board had changed within the last year, and Richardson, therefore, provided the much needed continuity to implement the construction plans of the War Department in Alaska. Lastly,

service in the North had "never been in any respect a 'fancy duty!" With few exceptions it had been as severe as could be imposed in the field or in campaigns outside of actual war. "If not always health-destroying, it had often been heartbreaking and has called for the full resourcefulness and the best spirit and courage, moral as well as physical, of which the officer or soldier is capable."²²

Richardson's eloquent appeal was successful, for President Taft intervened and directed his Secretary of War to exclude Richardson from the newly adopted policy of rotation. The president stated that he was sufficiently familiar with the lieutenant colonel's services in the North "to realize that it is to the advantage of the country, especially of Alaska" that outweighs any advantage to the Army" in sending him back to his command, to have him on duty in that new territory with which he is familiar from one end to the other...."²³

Orchard Appeal Unsuccessful

While Richardson successfully battled to retain his duty assignment, more than four hundred supporters of Orchard signed a pardon petition in Valdez, and his father and wife appealed to the Secretary of War for clemency -- all to no avail. In July, Orchard appealed to his father to use every political means available to gain a commutation of his sentence from the president. Orchard was bitter, claiming that if "I can get to my papers for 60 days I am sure I can show the proper parties up in such light that the president will be forced to act" on the commutation appeal. He was convinced that "Richardson has brought all the influence possible to bear to keep me here until he leaves Alaska" And although Orchard became eligible for parole in October 1912, Secretary Stimson refused to sign the necessary papers, and Orchard presumably served out his two-year term at Leavenworth.²⁴

Difficult Years for Richardson

The years 1911 and 1912 had been difficult times for Richardson.

His 1912 annual report was brief. He explained that the Board of Road Commissioners for Alaska had expanded its work continuously and had included new projects each year, some in remote sections of Alaska and not on established mail routes. And although Congress had appropriated \$125,000 for the work, the money did not become available until late August of that year. Fortunately for the continuation of the Board's work, the governor of Alaska had transferred \$80,000 for road work, which had accumulated in the reserve of the school portion of the Alaska Fund. This, together with the usual receipts from the Alaska Fund, allowed construction to go forward.²⁵

And there was much work which needed to be accomplished. One project involved improvements to the Chitina-Fairbanks road, a route capable of accommodating slow wagon traffic. For example, four horses could haul from three to four thousand pounds about twenty miles per day at any time during the summer. And although there were no impassable stretches, some of the streams and creeks caused inconveniences, delays, and sometimes danger when crossing during high water, breakup in the spring, and when the ice formed in the fall. A number of streams required bridges. The one across the Klutina River, constructed in 1900 for a pack trail, needed to be replaced. A ferry crossed the Gulkana River but it was not an entirely satisfactory arrangement because of the great variation in the depth and current of the river. Greer Creek was usually fordable, and piling for a bridge had been driven; Richardson hoped to complete the superstructure during the 1912 construction season. The Delta River was fordable, and so usually were the two glacier streams. The latter, however, were dangerous because of their swift currents and large boulders in their stream beds. Jarvis Creek was fordable, while the Tanana and Salcha Rivers were crossed by ferries, as was the Pile Driver Slough. Richardson intended to bridge all of these streams and rivers, except the formidable Tanana, as soon as funds became available. He also planned to have a completed roadway sixteen feet wide, crowned and with side ditches and culverts. Funds did not permit covering the road with gravel so the natural soil had to suffice.²⁶

By June 30, 1911, the Board had constructed the following mileages of wagon roads, sled roads, and trails:²⁷

Route No.	Name	WAGON ROADS		COST			Laborer's daily wage	Remarks
		Miles const	Total	Maint.	Total const.	Const. per mile		
1	Prince of Wales Island Portage	3.9	\$31,161.20	\$300.00	\$30,861.20	\$7,915.00	\$2.50	Includes 29 miles of plank road. Construction in very heavy timber, extremely wet soil and under adverse weather conditions.
2	Juneau - Eagle Creek	6.2	19,855.28		19,855.28	3,205.00	2.50	Heavy timber, -- includes three bridges.
3	Haines - Pleasant Camp	47.5	123,140.78	3,187.07	119,953.71	2,525.00	2.50	
27	Deering - Inmachuck	1.0	4,672.55		4,672.55	4,672.00	5.00	
32B	Iditarod-Flat Creek	0.6	2,980.88		2,980.88	4,967.00	6.00	
4B	Valdez - Ernestine	65.0	172,277.46	14,154.68	158,122.78	2,431.00	3.00	
11A	Eagle-O'Brien Creek	17.0	59,814.52	963.25	58,851.27	3,460.00	5.00	
9	Rampart-Big Minook	6.5	17,788.26		17,788.26	2,739.00	5.00	

Decreasing costs per mile through a total of 25 routes which are wholly or partly wagon roads.

A total of 800.2 miles of wagon roads have been constructed at a total cost, including all office and other expenses of whatever nature, and including maintenance, of \$1,634,960.14, or \$2,043.20 per mile.

Route No.	Name	SLED ROADS		COST			Laborer's daily wage	Remarks
		Miles const	Total	Maint.	Total const.	Const. per mile		
6A	Willow Creek - Tonsina River	24.0	\$16,071.33		\$16,071.33	\$670.00	\$3.00	More elaborate construction than usual for this class because of projected development to wagon road. Heavy timber.
9	Rampart-Big Minook (Minook-Glen Section)	19.5	12,460.00		12,460.00	639.00	5.00	
24	Mt. 29 A.N.R.R. - Moose Pass	24.0	6,551.65		6,551.65	273.00	2.50	Heavy timber. Wet soil. Partly corduroy.
11C	Steel Creek - Jack Wade Creek	9.9	5,051.63		5,051.63	510.00	5.00	
11B	O'Brien Creek - Forty Mile	30.0	14,035.19		14,035.19	468.00	5.00	
5	Fairbanks - Fort Gibbon	160.0	62,911.81	4,470.83	54,440.98	365.00	5.00	
4A	Donnelly-Washburn	55.0	20,069.85	3,108.11	16,881.74	307.00	5.00	
23B	Yukon - Chandler	75.0	21,175.35		21,175.35	282.00	5.00	

Decreasing values.

A total of 534 miles of sled road have been constructed at a total cost, including all office and other expenses of whatever nature and including maintenance, of \$104,474.76, or \$195.65 per mile.

Route No.	Name	TRAILS		COST			Laborer's daily wage	Remarks
		Miles const.	Total	Maint.	Total const.	Const. per mile		
1	Prince of Wales Island	7.0	\$8,261.00		\$8,261.00	\$1,180.00	\$2.50	Very heavy timber. Wet soil requiring large amount corduroy. Adverse weather conditions during construction.
2	Juneau-Eagle Creek	23.8	9,095.00		9,095.00	382.00	2.50	Heavy timber.
20A	Knik - Susitna	5.5	2,051.17		2,051.17	373.00	3.00	(Cost of location charged against mileage constructed. When the routes are completed the cost per mile will be largely reduced.)
20B	Susitna-Rainy Pass	26.6	5,700.08		5,700.08	214.00	3.00	
19	Kern Creek - Knik	44.8	8,841.80		8,841.80	197.00	3.00	
23A	Chatanika-Yukon	35.0	2,140.95		2,140.95	61.00	5.00	
18	Kaitag - Solomon	248.0	13,588.53		13,588.53	55.00	5.00	
Decreasing values								

A total of 1,557 miles of trail have been constructed at a total cost, including all office and other expenses of whatever nature and including maintenance, of \$130,454.98, or \$83.80 per mile.

Board's Accomplishments Impressive

Undoubtedly, the Board's accomplishments from 1905 to 1911 had been impressive. Yet, in a country as large as Alaska they seemed miniscule. Early in 1912, journalist J. J. Underwood declared that there were two artificial barriers preventing large-scale settlement of the territory: 1) no township surveys; 2) the lack of transportation facilities, to enable Alaskan products to reach markets. Underwood echoed Richardson when he proposed that the federal government underwrite the construction of a railroad from tidewater to the Interior, and that Congress appropriate substantial sums to build roads, "especially in the interior country." Once this was done, he predicted, thousands of emigrants, "millions perhaps, - Scandinavians, Germans, Italians, Slavonians, Spaniards" would rush to the wilderness of Alaska "to make productive fertile valleys and plains of that northern Land of Promise; building their towns and villages, creating their own prosperous ranches and farms, as their compatriots have done in Minnesota, Iowa, and other states...." Then his imagination ran away with him. These prospective Alaskans, he predicted, would leave the "fetid atmosphere of the sweatshops of New York and Philadelphia" and give up their struggles "for a half-starved subsistence in the slums of Chicago and Boston" and leave the toil in "the furnace rooms of the steel mills of Bethlehem and Pittsburg" in order to "live in the free and open country of immeasurable distances, of exhilarating temperate

atmosphere, of rushing mighty rivers and majestic mountains," and rear their children in an environment "calculated to make them a race of vigorous, happy, and contented people." But before this could happen, Alaska needed a transportation network. Once a railroad to the Interior had been built, proper aids to navigation installed, and roads and trails stretched across the country in every direction, Underwood predicted "that part of Alaska which lies south of the Yukon will not be a wilderness but an empire."²⁸

The Wickersham-Richardson Quarrel Continues

While Underwood spun dreams of a future Alaska, Wickersham prepared to assault Richardson. In March 1912 the delegate presented a long list of complaints about the activities of the Board to Henry L. Stimson, the Secretary of War. Together with these complaints, Wickersham furnished numerous affidavits of disgruntled citizens harshly criticizing Richardson and his organization. The delegate pointed out that between 1905 and January 1, 1912, the Board had expended \$1,419,631.78 from Congressional appropriations and \$838,455.18 from the Alaska Fund, for a total of \$2,258,086.96.²⁹

In Wickersham's view, but little had been accomplished for all these expenditures. In fact, "some of the government roads in Alaska are a disgrace to the nation" . . . consisting of a "strip of mud, roots and rocks, unfit for the use of man or beast, and positively ruinous, both to a man's body and soul." Wickersham suspected that the Board had probably spent the better part of two million dollars on the Valdez-Fairbanks road, and yet it remained merely an earthen structure which deteriorated significantly and became nearly impassable during long periods of wet weather.³⁰

Wickersham continued that the Board always answered criticism by pointing out that it had constructed a much greater mileage than the Canadians and that accounted for the greatly increased total dollar amount. The delegate demolished that argument to his satisfaction. The Board, in addition to wagon roads, built winter sled roads, trails,

and temporarily staked winter trails. The latter, he observed, were not roads at all but consisted of the "unmarked wilderness over the natural surface" on which roadhouse keepers, miners, mail carriers, and "in some few instances the board, have set a few poles to keep the weary 'musher' from losing his way. There is no road, no trail - but only a pole set up here and there as a guide." Wickersham felt it was a sham that the board included this "mileage" in its annual report, for it was merely "padding" to inflate the figures.³¹

He dismissed the trails as merely "a more cunning claim of more figures to increase the official statement of mileage." It was easy to increase the mileage from year to year by spending a few dollars on trails blazed by the miners and then add the whole of the trail mileage to the official figures. Winter sled roads offered "just as many chances for fine literary efforts on a minimum of good road work" as did trails. Anything level enough to hold snow and where the brush was not too thick nor the stumps too high qualified as a winter sled road, the delegate asserted.³²

In summary, the delegate charged that the \$2,258,086.96 devoted to the construction of wagon roads, bridges and trails in the North had "been wasted, embezzled, and taken by two big mercantile companies, unfairly and without reasonable value." Richardson had not embezzled any of that for he was an honest man - merely incompetent. Richardson had no "money sense" in that he blindly trusted two big mercantile firms in Alaska, the Northern Commercial Company and the S. Blum and Company to manage the road monies for him. These two firms, in turn, had established a system resulting in "incompetency, waste, failure in the management of the road work, and profit to themselves." In short, the Board had expended in excess of two million dollars and had nothing "permanent or satisfactory to show for it."³³

Wickersham asked Stimson to change the personnel of the Board and particularly relieve Richardson of his duties for "his habits and incompetency have wrecked the plan of road building in Alaska" and in his stead appoint an officer who was "both temperate and competent" to accomplish the desired goals. With a veiled threat, the delegate

stated that he anticipated that the War Department desired "to correct this situation as agreeably as possible" and that he, therefore, would not publicize his charges.³⁴

Richardson Defends Himself

Stimson informed Richardson of the charges, and the latter's first impulse was to tell the Secretary that Wickersham's allegations did not "merit the dignity of an extended reply....." But reply he did, and in detail, refuting all of Wickersham's charges. Richardson was particularly incensed with Lieutenant Orchard's affidavit accusing him of working against Wickersham's election. The delegate had included the affidavit in the materials he sent to Secretary Stimson and Richardson flatly stated that Orchard's affidavit was "an absolute and unqualified falsehood." In fact, Richardson had called Orchard into his office sometime before the election and told him not to engage in any type of political activity, and "gave preemptory orders throughout the territory to this effect....." Richardson considered Wickersham's repeated attacks against him "as a personal matter engaged in by him for reasons unknown" to him and had tried to deal with it without in any way injuring the interests of the public service with which he was entrusted.³⁵

Richardson continued that the delegate had ignored the fact that the Board could only distribute a relatively small amount of money "over a great stretch of country with widely separated settlements in the endeavor to give passable routes and meet the immediate needs" instead of expending all monies for short, but perfect roads. Richardson reminded the Secretary that in 1911 there was expended an average of \$46.70 per square mile in the contiguous states for road construction - but only 45¢ per square mile had been available in Alaska. Furthermore, taking into account the high Alaskan labor costs, climate, and vast distances it was easy to complain about the Board for its failure to provide good roads "for a pittance of a few cents per square mile."³⁶

Richardson stated that Wickersham's allegations were unsupported "by any evidence worthy of the name" and merely added

"another chapter to the attack which he has been waging upon me for two years, and which is nothing short of inhuman. It has disclosed to me a character the moral quality of which was heretofore utterly beyond the horizon of my experience, a character which would apparently without hesitation destroy, if possible, the good name and reputation of any man whom he thought in the smallest degree in the way of his own plans, regardless of any obligation to truth or sentiment of fair dealing between men."³⁷

FOOTNOTES

1. Nichols, Alaska, pp. 24-25; Evangeline Atwood, Frontier Politics: Alaska's James Wickersham (Portland, Oregon: Binford & Mort, 1979), p. 220.
2. Naske, Statehood, pp. 26-27.
3. Wickersham to Secretary of War J. M. Dickinson, January 2, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
4. Ibid.
5. Richardson to Chief of Staff, January 27, 1910, Secretary of War J. M. Dickinson to Wickersham, January 29, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
6. Wickersham to Secretary of War J. M. Dickinson, February 12, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
7. Confidential Memorandum for the Secretary of War, February 17, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
8. Wickersham to Martin Gateley, May 20, 1910, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
9. Alaska Citizen, July 23, 1910; Fairbanks Daily Times, July 27, 1910.
10. Richardson to Fairbanks Daily Times, August 7, 1910, file Richardson Wilds P., General Correspondence, Adjutant General's Office, R. G. 94, N.A.
11. Wickersham to Secretary of War Henry L. Stimson, July 6, 1911, Major General Arthur Murray to Wickersham, July 11, 1911, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.; Atwood, Wickersham, pp. 226-234.
12. J. M. Cobb to Judge L. G. Denman, November 8, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
13. Richardson to Adjutant General, October 23, 1911, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.

14. Sworn deposition by Sam C. Orchard, October 6, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
15. Ibid.
16. Sworn depositions by George W. Nelson, E. A. Amundson, November 8, 1911, Alice Neice, November 17, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
17. J. M. Cobb to L. G. Denman, November 11, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
18. Ibid.
19. Ibid.
20. The Daily Alaska Dispatch, December 23, 1911.
21. War Department, General Orders No. 4, February 17, 1912, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
22. Richardson to Adjutant General, February 9, 1912, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
23. Secretary of War to Richardson, January 31, 1912, February 16, 1912, Richardson to Adjutant General, February 9, 1912, President to Secretary of War, March 25, file Richardson, Wilds P., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
24. Valdez Miner, April 7, 1912; John Orchard to Henry L. Stimson, Secretary of War, February 19, 1912, Lola M. Orchard to Henry L. Stimson, Secretary of War, April 25, 1912, Henry L. Stimson, Secretary of War, to John Orchard, June 28, 1912, Sam C. Orchard to John Orchard, July 14, 1912, Lola M. Orchard to Henry L. Stimson, Secretary of War, November 14, 1912, file Orchard, Samuel C., General Correspondence, Adjutant General's Office, R.G. 94, N.A.
25. War Department, Report of the Board of Road Commissioners for Alaska, 1912 (Washington: GPO 1912), pp. 5-6.
26. Memorandum of the proposed improvement of the road from Chitina to Fairbanks, Alaska, December 7, 1911, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.

27. Memo to the President of the Board from 1st Lieutenant Glen E. Edgerton, Engineer Officer, Corps of Engineers, January 22, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File various files pertaining to Alaska, R.G. 94, N.A.
28. J. J. Underwood, "Population for Alaska awaits Transportation Facilities," Alaska-Yukon Magazine, February 1912, pp. 20-27.
29. Wickersham to Stimson, March 26, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files relating to Alaska, R. G. 94, N.A.
30. Ibid.
31. Ibid.
32. Ibid.
33. Ibid.
34. Ibid.
35. Richardson to Stimson, April 15, 1912, Records of the Adjutant General's Office, 1780s to 1917, AGO Doc File, various files pertaining to Alaska, R.G. 94, N.A.
36. Ibid.
37. Ibid.

CHAPTER FOUR

THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1912-1917

As expected, Stimson ordered a thorough inspection of the work of the Board and entrusted Lieutenant Colonel Thomas H. Rees with the task. The Colonel arrived in Nome on July 2, 1912, and accompanied by Lieutenant Glen E. Edgerton, the engineering officer of the Board, began a two month's tour of Alaska. Rees noted the difficulties encountered when constructing roads over terrain underlain by permafrost, and "the fact that roads have been built which carry heavy traction engines and heavily loaded trailers, as well as 6-horse teams with heavy loads, at a cost of about \$8,600 per mile (including maintenance for six years) is a very creditable showing." Rees found the Nome office in excellent condition, headed by Superintendent R. F. Hoffmark, who readily produced all called-for records, reports, vouchers and accounts. He also maintained a thorough system of cost accounting. In conversations with businessmen, miners, and travelers who did not know Rees, all commended the work of the Board and the results it accomplished. The only criticism the Colonel encountered was that the work did not go far enough "as nearly everyone knew of a road that should be built to a locality in which he was interested."¹

Rees next traveled to St. Michael where he met Bishop P. T. Rowe of the Episcopal Diocese of Alaska. The Bishop traveled constantly to all inhabited parts of Alaska, and therefore, was thoroughly familiar with the roads and trails and with the work of the Board. Rowe highly praised Richardson who was his personal friend and frequent travel companion.²

Lack of time prevented Rees from visiting the Innoko region or the new mining camps near Ruby. Both regions, Rees found, well illustrated a major difficulty constantly facing the Board. A new strike caused a stampede and immediately there were demands for supplies to support the community. In order to transport needed goods, miners and freighters opened trails. Soon the stampeders demanded that the Board build roads leading to the new camps. Often, however, the strikes became quickly

exhausted and the camps dwindled and disappeared. Only rarely did the camps develop into permanent settlements, and the Board did not want to expend funds for roads to certain ghost towns. If roads were not promptly built to all the new camps, however, the Board was "censured for inactivity and dilatoriness." If it did build roads to camps which promised permanency but were finally abandoned, the Board was charged with building useless roads which "lead nowhere although the demand may have been insistent and well founded when the road was built."³

From St. Michael, Rees traveled to Tanana where he talked with William A. Gilmore who opposed Wickersham in the race for delegate to Congress. Gilmore, although disapproving of the Board method for conducting road construction, still believed that the work was well done and honestly conducted. Questioned about Richardson, he stated that he had met him several times and was impressed with the man. According to Gilmore, Richardson had never engaged in any political activity. In fact, "at a recent conversation Colonel Richardson had withdrawn from a group of men when the talk turned to political matters and declined to discuss the subject."⁴

From Tanana, Rees moved to Fairbanks where he found the roads leading to the mining areas of Fox, Cleary, Chatanika, Ester Dome and adjacent creeks in excellent condition and suitable for automobile traffic. The Fairbanks office, under the direction of John Zug, was well run and all documentation in excellent shape. Interviews with various Fairbanks citizens elicited only praise for the work the Board performed. From Fairbanks, Rees traveled to Valdez with a side trip to Chitina in a two-horse buckboard. It took him fourteen and one-half days to cover the distance of 460 miles. Rees found the road of uneven quality, but there was no place where a wagon could not move forward steadily and without delay. Rees considered the construction of the road a tremendous undertaking, and the results accomplished in the short time and with the limited funds nothing but remarkable. The road traversed a rugged wilderness with very few inhabitants between the terminal points. The traveler encountered river bottoms, marshes, steep bluffs, mountains, glaciers, rivers and gorges in alternating succession. Rees observed

that supplying this effort was very difficult, the working season short, and labor costs very high. The Board had been correct in opening a passable road for the whole distance instead of trying to complete only a portion. In the latter instance, the road would have been useless for years to come. Richardson had been successful in constructing a good winter road and a passable summer road. Rees found the Valdez office to be in excellent shape, just like the others, and the superintendent of the district, J. H. Ingram, to be a thoroughly practical man with great experience and "a happy faculty of handling men and getting a large amount of work out of them."⁵

Rees next went to Seward, and stopped at Cordova, Juneau and Ketchikan on his return to Seattle. At all stops he inquired into the specific allegations made by Delegate Wickersham but found "very little evidence either in support or denial of those statements." In fact, except in a couple of cases, nobody had ever heard of the incidents Wickersham had cited. Rees concluded that the delegate's allegations were without foundation. Specifically, Alaska Road Commission funds had not been wasted, embezzled, or taken by the two big mercantile companies unfairly and without reasonable value. These two companies did not dominate, control, or dictate to the Alaska Road Commission. No companies had any monopolies in furnishing supplies to the ARC but rather there had been fair competition. Roads and trails had been built where most needed, and none had been constructed to favor special interests. In fact, many special requests had been turned down. The system of purchases and disbursement in use had been devised to meet the unusual Alaskan circumstances of great distances, poor communications, isolated locations where work was performed, and the physical impossibility of sending all bills and vouchers to the disbursing officer in Valdez and sending back checks in payment in one season. Defalcations that did occur were discovered as soon as the accounts relating to them balanced - and this was all any organization could have done. The Alaska Road Commission, contrary to Wickersham, did not pad the mileage in its annual reports nor make any misleading statements. Furthermore, the roads built by the ARC compared favorably with those constructed in the

Yukon Territory, both in quality and cost. Rees did not see any completed roads which could be called "a strip of mud, roots and rocks," although on roads under construction that description did apply for limited time periods.⁶

Rees concluded that Colonel Richardson loved Alaska and its people and was imbued with its spirit of romance and sentiment. Rees found him to be a frank, generous, cordial and companionable individual who was able to win the friendship and loyalty of different classes of people he met. Rees had "never known another man so universally liked, esteemed and respected as he is in Alaska. His whole thought, energy and attention are given to the interests and development of Alaska without fear or favor. He is a conscientious, honorable and able man."⁷ Richardson was pleased with the investigation and its results, for it vindicated his honor and showed Wickersham to have been untruthful and vindictive. But the Colonel also knew that Wickersham would not abandon his efforts to force him from office.

1912 Poor Construction Season

Adding to his many troubles, Richardson had to conclude that 1912 had been a very poor construction season because excessive rains had caused considerable damage to the Fairbanks - Valdez wagon road, especially the stretch along the Tanana and Delta Rivers. Richardson stated that "the resources of the Board have been taxed to keep the road to the interior open and passable, and at times it has seemed in danger of utter destruction." The Copper River and Northwestern Railway, the only other outlet to the ocean, had been damaged severely and forced to suspend traffic for several weeks. Richardson reiterated that the Board had petitions for road construction in its files which, conservatively estimated, would require expenditures of approximately \$1,600,000. The Board was not allowed, however, to submit an estimate for funds to meet such demands unless allowed by law to do so. In past years the appropriations, which had supplemented the Alaska Fund and had been carried as a charge against the support of the Army, now became limited to only such

sums as absolutely necessary to maintain and repair the existing military and post roads.⁸

By June 30 the Board had spent \$317,303.72 of the total \$317,646.59 that was available and built the following additional mileage:

Wagon roads	18 miles
Winter sled roads	52 miles
Trails	32 miles

The Board had also allotted \$5,000 to begin construction of an approximately eighty-mile winter trail from Fairbanks to Chena Hot Springs and staked about 450 miles of trails for winter travel only. In addition, the Board undertook the following important new projects during the season: Wagon roads of 3.1 miles from Juneau to Sheep Creek; 5 miles from Douglas to Gastineau Channel; a 10 mile extension from Circle City to Central House; sled roads of 29 miles from Ruby to Long Creek; and a 12 mile extension from Moose Pass to the Kenai Peninsula.⁹

Wickersham and Alaska's Second Organic Act

The year 1912 was an eventful one for Delegate Wickersham as well. In hearings held in 1910 on the Beveridge bill, it had soon become evident that there was strong opposition to the president's plan. After some political maneuvering the administration had abandoned its proposal. The defeat was in no small part due to Wickersham's skillful use of the conservation issue to obtain support for Alaska home rule. The delegate pointed out that the resources of Alaska should be used for the benefit of the entire country. Yet, so far, the Territory had been exploited by a few large, absentee-controlled corporations, such as the monopolies which harvested the fur seals and salmon and mined the copper deposits. Home rule, Wickersham asserted, would allow proper utilization of Alaska's wealth.¹⁰

Wickersham's home-rule scheme gained substantial support in 1911 from the legislatures of Washington and Oregon and commercial associations

of those states. The senators and representatives from these areas were instructed to vote for Alaska home rule. Democratic presidential aspirants, such as Woodrow Wilson, Oscar Underwood, and William Jennings Bryan, were pledged to support the home-rule plank of their party. In this favorable atmosphere, hearings on Wickersham's home-rule bill began in the spring of 1911 before the House Committee on Territories, and by late summer of 1911 the passage of the Wickersham measure seemed reasonably assured.

In a special message to Congress on February 2, 1912, President Taft dealt extensively with Alaska. He urged Congress to enact legislation which would help the Territory develop its resources. On April 24, 1912 the House unanimously passed Wickersham's elective legislative assembly bill, and on July 24, 1912, the Senate passed the delegate's measure in essentially the same form in which its author had drafted it. On August 24, 1912 the president signed the Wickersham measure into law. The Organic Act of 1912 gave Alaska a Senate of eight members and a House of 16 to be chosen equally from the four judicial divisions. Although limited in powers, the legislature could nevertheless deal effectively with a wide variety of matters.¹¹

The First Territorial Legislature and Roads

The first territorial legislature met in Juneau early in 1913, and among other matters, it dealt with road construction. It repealed the road-tax law of April 27, 1904, which had required two days labor from each able-bodied male resident on public roads or the payment of eight dollars. In its stead it enacted a substitute, levying a flat tax of four dollars inside as well as outside incorporated towns. While in force, a substantial amount of work had been accomplished on local projects under the 1904 road-tax law, but there never had been any coordination between projects nor planning of any kind. In some districts, superintendents of the Board of Road Commissioners for Alaska had supervised the work, although never formally charged with the authority or

responsibility for handling it generally.¹²

The Second Territorial Legislature and Roads

In 1915 the Territorial legislature created road districts that corresponded with judicial divisions and provided for an elected road commissioner for each district. Each commissioner was to receive as compensation five percent of all money expended by him. And although each road commissioner could appoint two assistants as inspectors, the legislature made no provisions for their compensation. To pay for the work, the lawmakers appropriated seventy-five percent of forest revenues for this purpose.¹³

The Third Territorial Legislature and Roads

In 1917 the Territorial legislature once again dealt with road matters. It appropriated \$20,000 for shelter cabins, to be expended under the general supervision of the governor of Alaska by the road commissioners, who were to receive five percent of this fund for their services. It also created the Territorial Board of Road Commissioners and instructed it to submit estimates for the construction of essential road work. Within each road district it created a divisional board, consisting of an elected chairman (receiving an annual salary of \$2,000) and two other members to be appointed by the territorial board (receiving expenses when working). Each divisional board was required to submit an annual report to the territorial board. The legislature also appropriated \$400,000 for the biennium, to be equally divided between the four road districts.¹⁴ The work of the Territorial legislature in the transportation field indicated that it would soon develop some sort of relationship with the Board of Road Commissioners for Alaska.

Wickersham's Renewed Efforts Against Richardson

In the spring of 1913 the delegate renewed his offensive against

Richardson. Disappointed that a War Department investigation had exonerated his foe, Wickersham now turned to Secretary of the Interior Franklin K. Lane. The delegate pointed out that Richardson, assigned to special duty in Alaska, had been absent from his command almost continually for fourteen years; appointed president of the Board of Road Commissioners for Alaska in 1905, he had performed that special duty for eight years. Such long continued assignments, Wickersham told Lane, violated the law which called for frequent rotations. Even worse, Richardson spent six months each year in the capital lobbying for increased appropriations "for his alleged dirt roads in Alaska and in assisting the big interests, the Guggenheim-Sloss interests, to secure a firmer grip on the resources of Alaska." Richardson spent the summers in the North where he traveled "by easy routes from point to point" enjoying the hospitality of his friends. In election, or odd-numbered years, Wickersham continued, Richardson repaid his corporate friends and Mr. Taft by engaging in political work from Ketchikan to Nome at public expense. The delegate stated that Richardson had successfully aided twice in securing the delegates to the Republican National Convention for Taft. More offensive, in 1908, 1910 and 1912 Richardson had helped the "stand-pat Guggenheim Republican candidates in their efforts to defeat me." That was a long list of offenses, but perhaps "the meanest thing I ever knew him to do..." was to assist the Bureau of Insular Affairs in drafting the "infamous Beveridge bill which was intended to get Mr. Taft to appoint a legislative council over Alaska...." Richardson was to have been a council member, and all nine men on the council, Wickersham charged, "were to be the friends, agents or attorneys of the Morgan-Guggenheim Alaska Syndicate," the delegate's arch enemy. The Beveridge bill, which fortunately failed, was the "most infamous attempt ever made in American history to loot a great territory and Richardson was to be the principal in the attempted grand larceny of national wealth." Wickersham also reminded the secretary of the Lieutenant Orchard scandal, and suggested that in addition to the \$16,000 Orchard had embezzled, many thousands more were hidden by technically correct accounts. In fact, Wickersham wrote in his best purple prose, "drunkenness, debauchery and embezzlement have oozed

from this shameful waste of public funds in Alaska." Much to the delegate's disgust, however, the War Department had protected Richardson and "maintained him in incompetent control under the powerful influence of the selfish interests engaged in monopolizing the resources of our unhappy country." Perhaps, Wickersham suggested, a new administration could right these wrongs.¹⁵

Richardson Defends Himself

Secretary Lane knew nothing about the controversies surrounding the Board of Road Commissioners for Alaska and therefore transmitted the delegate's complaints to the War Department. Once again, Richardson had to defend himself. He refuted each one of Wickersham's allegations, concluding that despite repeated accusations that Board funds had been wasted for years, Wickersham had not submitted any evidence supporting "such a reckless and unjust statement." Richardson concluded that the work accomplished with the available funds clearly contradicted Wickersham's accusations.¹⁶

The Alaska Railroad

While the two men quarreled, the administration's attitude toward Alaska changed. Even before the passage of Wickersham's home rule bill, President Taft had sent a special message to Congress on February 2, 1912, asking for government construction and ownership of an Alaska railroad. In fact, Wickersham's home rule bill had carried a Taft rider, (section 18), authorizing the president to appoint a commission to study and recommend those Alaska railroad routes that would best develop the territory's resources for the use of all Americans. Taft appointed an Alaska Railroad Commission, consisting of an Army, Navy, and civilian engineer in addition to Alfred H. Brooks, an old Alaska hand of the U.S. Geological Survey. The commission left Seattle on September 10, 1912 bound for Alaska and handed their finished report to the president on January 20, 1913.

A variety of railroad bills was introduced in Congress. In early

1914 both houses passed an Alaska Railroad measure, which President Woodrow Wilson signed into law on March 12, 1914. Essentially, the act empowered the president to choose the location and authorize construction of a railroad or railroads connecting at least one Pacific port with the great interior rivers and one or more coal fields. There were two restrictions on the president's authority. One limited the two aggregate mileages to one thousand, and the other authorized a maximum expenditure of thirty-five million dollars. After the president had chosen a route, construction of the Alaska Railroad, connecting Seward at tidewater with Fairbanks in the interior for a distance of 470 miles, began in April 1915. It was completed in 1923 at a cost nearly twice that of the original authorization.¹⁷

Alaska Road Commission Eight-Year Progress Assessment

While the railroad boom engaged the attentions of northern residents, the Board of Road Commissioners for Alaska continued its construction and maintenance work but also took the time to assess the work it had accomplished since 1905. Between the latter year and 1913, Congress had appropriated a total of \$1,375,000 for the "construction and maintenance of military and post roads, bridges, and trails" in Alaska. The Alaska Fund had yielded \$1,160,829.62 in that time span, for a total of \$2,535,829.62 from both sources. With those funds, the Board had constructed and maintained the following mileage of roads and trails:

Wagon road	862 miles
Winter sled roads	617 miles
Trail	2,167 miles

The cost per mile, including maintenance and all expenditures by the Board, had mounted to:

Wagon road	\$2,489.68
Winter sled road	\$ 278.80
Trail	90.44

Also, at different times since 1905, the towns of Fairbanks, Nome, Cordova, as well as some of the large mining companies had made cash donations of approximately \$20,000 to aid the work of the Board.¹⁸

During its eight years of existence, the Board had accomplished much, although the mileage constructed so far constituted only the very beginning of a proper transportation system for Alaska. The Board considered the 419-mile-long wagon road from Valdez to Fairbanks, including the Willow Creek-Chitina branch, to be its most important achievement so far. With an average expenditure of about \$1,500 per mile, the Board thought it could be improved to the standards of a fair automobile road. In fact, during the late summer of 1913, the Board had sent a three-quarter ton field truck "of the type being experimented with by the Quartermaster and Medical Corps of the Army" on a round trip from Valdez to Fairbanks. The vehicle left Valdez on July 28 and returned on August 19, after having made a side trip to Chitina. The truck had covered 922 miles, making about 50 miles per day. In some instances, it had to be helped through soft spots on steep grades, but overall the trip had been successful.

The Board also had prepared an estimate of what it would cost to complete a system of roads and trails for Alaska that would meet traffic needs 10 years in the future, namely:

Maintenance of present roads	\$1,250,000
Completion of projects on which work has already started and maintenance after completion	\$1,420,000
Projects approved but on which no construction has been undertaken	\$2,780,000
Projects not yet of importance but will become so as other roads are constructed	<u>\$1,800,000</u>
TOTAL	\$7,250,000

Additionally, the Board considered the matter of railroad construction but concluded that Alaska needed wagon roads first. While disavowing any intent to discourage railroad construction, the board nevertheless

pointed out that

after several years of careful observation and study of the land transportation conditions and of the natural inducements to development and settlement which exist, is convinced that no rapid or general development will follow the construction of trunk lines of railroad into the interior unless preceded or accompanied by the construction of numerous wagon roads and trails as feeders, and even then the development will be slow.¹⁹

The Report of the Board of Road Commissioners for Alaska for 1914

In 1914 the Board reported that Congress had appropriated \$155,000 but that \$54,787.83 had been spent to build a dike around Valdez in order to protect the terminals and buildings of the military cable and telegraph system from glacial floods. The Alaska Fund had yielded \$170,688.37. There just had not been enough money to construct much additional road and trail mileage since nearly all of the funds were required for the repair and maintenance of the existing system. In fact, Board president Richardson cautioned that "this will become practically a fixed condition from year to year, with the amount of mileage now required to be maintained unless some provision shall be made for increasing the fund to take care of new projects."²⁰

Wickersham Attacks Richardson Once Again

Different communities throughout Alaska presented meritorious projects to the Board every year for which there just were not any funds. The City of Fairbanks, for example, had unsuccessfully petitioned the Board to build a bridge across the Chena River which divided the city. It then had contacted the Secretary of War and asked for help. Delegate Wickersham also was informed of the request. The delegate quickly fixed the blame for unaccomplished work. It was simple. Richardson just did not ask for enough money in his annual budget presentations. For the fiscal year ending June 30, 1916, Richardson, through the War

Department, had requested a mere \$125,000. "Instead of asking for \$750,000, as Richardson has always talked to you about, "Wickersham stated,

he only asked for a piddling amount, and then he comes to Alaska and lies to you people by saying that he cannot get the appropriation he asks for. The truth is that he makes no effort to secure any appropriation except merely to keep the work going from year to year and to keep up his commission. He does not want to build the bridge across the slough at Fairbanks and never will build it until the Northern Commercial Company tells him to. You know and I know and everybody else knows that Richardson and his Road Commission is under the control of the Northern Commercial Company.....²¹

Wickersham did not mention that since 1913 the Board of Road Commissioners for Alaska was authorized only to submit estimates necessary to maintain the existing road system. The War Department had made this ruling because the special congressional funds for Alaskan road work had always been charged against the general financial support of the Army.

Richardson Replies to Wickersham

Richardson soon enough heard of the delegate's allegations. On November 25, 1913 he had submitted a special report on the needs for work in Alaska to the War Department and accompanied it with a request for a supplemental appropriation for \$750,000. He had not been encouraged by the Department, however, but told Alaskans during the summer of 1914 that he still hoped Congress would consider the request favorably. That had not happened. Calling him a liar and the Board under the control of the Northern Commercial Company was totally unjustified. Richardson stated, and indeed it was Wickersham who

is a purposeful and malignant liar himself and depends upon his position as a member of Congress to escape the just results of any defamatory attack he may choose to make. His entire letter is without justification in any existing facts and is perhaps what one might expect from a scurrilous, political blatherskite, permanently afflicted with about every phase of mental perversion and a complete moral idiocy.²²

Wickersham Outraged

It now was Wickersham's turn to be outraged. After persecuting Richardson for years, he now found the latter's remarks "so ungentlemanly and abusive in its character as not to deserve reply...." But reply he did, and in great detail at that. Basically, Wickersham's complaint was that Richardson seemingly never had

a very clear conception of the duties of the delegate from Alaska whose rights you have always treated as of minor importance, while you have always magnified those of your own position and assumed to extend them to cover those of a representative in Congress. It is often difficult to tell from your acts whether you or the delegate is the representative from Alaska.²³

Wickersham lengthily lectured Richardson on the differences between their respective duties and prerogatives. What particularly bothered the Delegate was the fact that Richardson always spent the winters in Washington and was on good terms with many members of Congress and the executive branch. Wickersham furthermore was convinced that Richardson had always lobbied "in opposition to his [the delegate's] efforts to procure better legislation for Alaska, and both in Alaska and Washington you have threatened, abused, cursed, and otherwise harassed and impeded him in the performance of his duty." Wickersham once again recounted a long list of grievances, real or imagined, which he harbored against Richardson, including meddling in Alaskan local politics, favoritism toward the Northern Commercial Company and various other large economic interests, and incompetency in conducting the work of building roads and trails, bridges, and ferries. In conclusion, Wickersham reminded Richardson that it was the delegate's right and duty to protect the interests of Alaskans

from your viciously incompetent mismanagement of the road fund, and if you think you can prevent it by threats and profanity you are greatly mistaken. If you could be taught to appreciate your position . . . to give more attention to the building of roads . . . and less to politics, to use less liquor and more temperature language . . . to let your road work out by bids to contractors and draw your checks on a government depository, to compel your foremen to work more and play poker and pangini less--then you might get to the point where the people would have some confidence in you and less disgust at your failure.²⁴

Doubtlessly, Wickersham disliked Richardson so intensely because he saw in him a competitor for power and influence, and he did not forgive him for having championed President Taft's scheme for a military government for the Territory. In addition, the colonel had a power base in Alaska through his control of a sizable payroll. The delegate, rightly or wrongly, was convinced that Richardson used his territorial powers to hurt him politically. The colonel was convinced that Wickersham was out to wreck his military career. By 1916 the rift between the two men was beyond repair.

Early in 1916, Richardson again requested a supplemental appropriation of \$500,000 for 1917 in order to finish the Valdez-Chitina-Fairbanks military road and continue work on the Ruby-Long Creek Road (Figure 3). The two antagonists appeared before the House Committee on Military Affairs on April 11, 1916 and requested the extra money. Wickersham argued that it was high time for the Board to finish its work in Alaska, while Richardson maintained that the Army, which had done much of the pioneer work in opening American frontiers, was doing the same thing in Alaska. "What has been accomplished in Alaska," the Colonel stated, "is creditable to the Army and can only be appreciated fully by those familiar with the conditions prior to 1898 or who can picture the present condition if the Army work did not exist." Committee members listened attentively but did not make any promises.²⁵

A year later, Wickersham had changed his mind about the requested supplemental appropriation and noted that he had been "working up an assault on the appropriation carried in the Military Appropriation Bill of \$500,000 for the Alaska Board of Road Commissioners...." He did not want to go on record as opposing the money, so he asked a colleague from Ohio to make the point of order against the item. "I intend to put every obstacle in the way of the Board and hope finally to drive it out of existence. I feel fully justified in doing it for it seems the only way to protect the 'Alaska Fund' and prevent the Board from wasting it also." The next day his colleague, as agreed upon, raised the point of order, claiming that the money was not authorized by any previous law. The Speaker of the House sustained the objection, "and out went the

\$500,000 appropriation for the support of Colonel Richardson's wagon road work in Alaska." Wickersham recalled that he "sat quietly in my seat and heard the fight without saying a word. The Congressional Record of this date contains the record of the beginning of the end of the Alaska Board of Road Commissioners--a proper end." On February 25 the Delegate noted that Richardson had been busy telegraphing friends in Alaska, telling them that "I killed his appropriation and I am getting telegrams urging appropriation." Wickersham contacted his Alaskan friends and told them to look at the Congressional Record, which proved that he had not objected to the appropriation. Privately, he remarked that "it is necessary to the freedom and development of Alaska that this appropriation be fully and finally beaten, so we may be rid of Richardson and his domination, and I intend to see that it is done be the consequences good or bad to me.²⁶ Much to the delegate's chagrin, however, the Senate restored the \$500,000. Richardson had won the fiscal battle.

Records of the Board of Road Commissioners for Alaska Destroyed

In the meantime, a devastating fire swept through Valdez, partially destroying the town, and also burning the headquarters building of the Board. It destroyed the office equipment and all files. The organization recovered quickly, however, moved to Juneau and into new quarters, and resumed its work.

Request for Trail Staking in Western Alaska

Not surprisingly, the Board continued to receive more requests for trail and road construction than it could possibly accomplish with its limited budget. For example, in May 1916, Harry H. Brown, a warden of the Alaska Fisheries Service of the U.S. Bureau of Fisheries, appealed to the Board to put up trail markings for winter travel on the Alaska Peninsula and the Bristol Bay region. Not a single marking defined any trail in western Alaska, a wilderness region where travelers went for many miles without encountering either white or native dwellings. And

although travelers generally knew the general direction where they wanted to go they often lost the indistinct trail and wandered around for days before finding it again. Brown recounted the experiences of several government employees during the past winter. Mrs. Corinne Call, the school teacher at Dillingham, and Mrs. H. J. Paulsen, the wife of the U.S. Deputy Marshal in the town, had departed for Koggiung during the Christmas season together with three Eskimo girls and two Eskimo guides. More than a week later the party arrived at Billy Hurley's trading post far up on the Nushagak River. The guides had lost their way. There were many similar occurrences, Brown continued, all supporting his plea for marked trails.²⁷

Western Alaska possessed a difficult geography, Brown stated. The vast tundras were intersected by creeks, ravines, and rivers, and dotted with myriad small lakes, all resembling one another. One had to be an expert pathfinder to make a trip without losing time and adding miles to the journey. In the summer everyone traveled by boat since the tundra had become impassable. In the winter conditions were reversed. All water bodies froze solidly, and the frozen tundra now supported the weight of travelers and dog teams. Brown then suggested that competent trail guides determine their course, and that all wilderness trails be marked with stakes not more than one quarter mile apart. These stakes should stand at least eight feet above the tundra and be painted a brilliant color, making them brightly visible in a snowy landscape. At curves or angles in the trail, or at points where barriers restricted a traveler's vision, the stakes should have pointers enabling individuals on the trail to place the approximate location of the succeeding stakes instantly. Such a program of marking would be relatively inexpensive, Brown thought, and make winter travel "vastly more comfortable and safe," increase the number of travelers and make "the monotony and isolation of this region during winter . . . more endurable."

The Board Stakes Dillingham-Koggiung Trail

A few months later the Board responded to the request by re-

leasing proposals for bids to stake completely the approximately sixty-mile-long main trail from Dillingham to Koggiung. Colonel Richardson followed Brown's proposal in trail staking in most particulars, but instead of painting the markers directed that they have a red flag or streamer conspicuously displayed on top. Richardson pointed out, however, that limited Board funds allowed only the staking of heavily traveled main trails. And since it was too expensive to send a Board foreman to oversee the work, he asked that Dillingham appoint an individual "who will volunteer without compensation to oversee the work and . . . see the same is substantially and well done."²⁹ The Commission let the contract and the Dillingham to Koggiung trail was staked.

Reconnaissance and Construction, Iliamna Bay to Iliamna Lake

In 1916, the Board dispatched John Zug, an assistant engineer, to examine the route from the head of Iliamna Bay to Iliamna village. Zug reported that the approximately twelve mile long road was needed to make the Iliamna Lake region accessible from Iliamna Bay, saving travelers the long trip by way of Dutch Harbor. He estimated that the contemplated low-standard wagon road could be built for about \$8,000 by following the existing trail. The Board decided to spend the money for the project, and at the end of July, 1917, P. Cooper, a Board foreman, together with seven laborers, a cook and about three and one half tons of supplies and tools arrived at A.C. Point, Iliamna Bay. From there, the outfit had to be transferred to the head of the Bay in two small skiffs, a distance of about two miles. It was a laborious process since the men could only make one round trip on each tide because of the extensive mud flats at the head of the Bay. It took six tides to move the supplies and tools, and from there the men had to carry the outfit for another two miles on their backs to the first campsite. At the end of the 1917 season, the crew had constructed 9.5 miles of road, leaving another 1.5 miles to reach the village. W. G. Fenton, the new foreman who had replaced Cooper in August, observed that the best route to reach Iliamna Lake crossed the river at the village and from there wound through low, rolling hills

providing a solid roadbed, while the Pile Bay harbor provided an ideal anchorage for small craft. Another two miles of road needed to be constructed to reach Iliamna River at a point accessible to launches coming from Bristol Bay, and another five miles to reach Pile Bay on Iliamna Lake. In view of insufficient funds, the Board decided to finish only the remaining two miles to the Iliamna River, particularly since two larger and three smaller bridges had to be constructed with the remaining funds.³⁰

Request for Wagon Road from Talkeetna to Iron Creek

While the outlying districts asked for trail staking and road construction, the railroad construction boom revived mining activities along the route. Early in 1917, W. A. Monroe, a citizen of Spokane, Washington, and the spokesman for a group of surveyors, enlisted the help of C. C. Dill, a member of the House of Representatives, in his quest to have the Board first build a trail and then a wagon road from Talkeetna on the government railroad to the group's mineral claims on Iron Creek, a distance of approximately forty miles. Monroe was satisfied that the group's six locations, the Copper Queen, the Copper King, East View, and the Springer and Talkeetna Groups would produce handsomely once properly developed and would supply important tonnage to the railroad. Representative Dill conferred with Richardson about the request, but was told only that the Board would consider the request. Richardson warned, however, that "the demands upon the Board are far in excess of what . . . [it] is able to accomplish with the funds available and new projects are coming up continually which have to take their turn for consideration." A few days later, seventy-two miners, prospectors, and citizens of the Talkeetna mining district petitioned Richardson to build the wagon road to Iron Creek to help open up the valuable copper deposits. Richardson promised to consider the request. He told Congressmen from Washington that the Board intended to make substantial improvements in the Matanuska District, but reminded them that this depended on the military appropriation bill to come before the extra session of Congress.³¹ In essence, Richardson told

the Washington House delegation that the Board would happily satisfy constituents' requests - but that this depended on help with the appropriation bill.

Reconnaissance in the Matanuska and Susitna Valleys

Richardson knew that railroad construction had brought an influx of job seekers as well as prospectors and miners into the Matanuska and Susitna valleys. As early as 1916, therefore, he had directed Assistant Engineer John Zug to examine conditions in the areas adjacent to the new government railroad. Zug spent the summer battling mosquitoes, enduring wind and rain as well as enjoying warm, bright and, sunny days, and after three months submitted his report. He found only three districts sufficiently developed to "produce any considerable immediate traffic and demand for roads." The first was the Willow Creek Mining District, served by the Knik-Willow Creek road, the second the Cache Creek Mining District, and the third the farming region of the Matanuska Valley. Existing roads and trails partially served all of them, but considerable improvement was required to permit heavy traffic and lower freight rates. A portion of Zug's report follows:³²

3. The Willow Creek Mining District is now served by the Knik-Willow Creek Road (Route 35). This road has been cut down by long usage so that the general level is in many places below that of the adjacent ground and in wet weather the holes become filled with mud and water. In dry weather it is possible to haul good sized loads over it at a cost of \$60 per ton. Improvement of the road will probably reduce this rate to \$20 per ton and perhaps \$15. The main line of the railway crosses the road at mile 14 1/2 and most of the freight will probably be hauled from this point as soon as the road is in operation. The road requires widening out, ditching, and surfacing. The material from the ditches will probably be sufficient to fill the low spots and gravel for surfacing is accessible at convenient points all along the line. The traffic over the road is heavy and constant throughout the summer. Definite information as to the quantity of it has not yet been received. The expense of putting this road in first class condition will probably average at least \$1000 per mile. In addition an extension of about four miles is desired on the upper end and it will probably be necessary to rebuild the bridge over the Little Susitna. The total amount required will be about \$25,000.

4. The Cache Creek Mining District is not directly tributary to the railroad at present except at Anchorage. All travel and traffic into it goes by water to McDougall on the Yentna River. thence across country by trail to the Kahiltna River and thence by a very rough pack trail in summer and in winter via the Kahiltna River to the mouth of Cache Creek and thence up the Creek. The improvement of summer travel conditions is covered by my report of July 19, 1916. Subsequent development of this district may require the construction of another road some time in the future to obtain more direct communication with the railroad either at Talkeetna or some point further north.
5. The farming district of the Matanuska valley lies between the branch line of the railway extending to the coal fields and the Willow Creek Road. In general it embraces two townships viz Nos. 17 and 18 North, Ranges 1 & 2 East Seward Meridian. It covers about half of the four townships and within the limits of this area consisting of about 72 square miles. The soil is extremely fertile. Beyond these limits it is not so good. Most of the available and accessible land is occupied and considerable clearing has been done and improvements made. There are two general routes of travel through the district. One road extends in a general northwesterly direction from Matanuska to Wasilla Creek and thence northward to an old trail from Knik to Moose Creek. The other follows the valley of Wassilla Creek from a point on the main line of the railroad 4 miles west of Matanuska to an intersection with the first named road in Sec. 24 Twp. 18 N. R 1 E. Considerable clearing, grubbing and grading has already been done by the settlers on those roads. The general location of these roads is good and they serve the most improved portion of the valley. In addition to these roads wagon roads have been constructed by the Engineering Commission from Matanuska to the Willow Creek road and from Matanuska to Moose Creek approximately paralleling respectively the main line and the branch line of the railroad. An additional road is needed from Farmington four miles north of Matanuska through the center of township 18 to intercept the Willow Creek road at some convenient point north of mile 25. It is believed these roads will adequately serve the greater portion of the farming area of the Matanuska valley. They will aggregate about 24 miles in length and cost approximately \$1000 per mile. In addition the road from Farmington should be extended East across the railroad to Palmer's Canyon and a bridge built across the Matanuska river at this point. This will require about two miles of road and a bridge probably 450 feet long with a span of 75 to 100 feet across the channel. This will cost about \$8,000 additional.
6. The Engineering Commission has constructed about 60 miles of road at an aggregate cost of \$45,000. These roads parallel the railroad line in a general way, though in places they leave the line for considerable distances. They are only ordinary narrow,

cleared and grubbed roadway, without any elaborate construction. Considerable grading has been done where required and there are occasional stretches of corduroy. The roads are finished to a sufficient degree to serve their purpose in advancing the construction of the railway but not being ditched or surfaced will deteriorate rapidly and cost considerable for maintenance. They will probably keep them in sufficient repair for ordinary use until the end of the present season when they will probably not require them any longer for their own use. The maintenance of these roads in their present state will cost probably \$100 to \$150 per mile. The cost of their improvement will depend upon the character of roads the Board decides to maintain in this region. Except on the Willow Creek road it is not believed the traffic will be heavy enough to require surfacing. In most places in this district, gravel is close to the surface and the character of the soil is such that it drains readily. A statement of the cost of roads constructed by the Engineering Commission to June 30, 1916, is herewith.

7. It is believed an appropriation of \$75,000 will be sufficient to provide for the present needs of the district. Development has not proceeded much in advance of the railroad either on the main line or the branch line. One coal vein has been opened at Moose Creek and is producing regularly. The bunkers are connected with the railroad by a siding and the siding is reached by a tram line from the mine. It is expected the railroad will be so located as to serve the heart of the coal field but no doubt wagon roads will be needed at some later stage of development. It is probable that roads will also be needed along the main line as construction is advanced and it might be advisable to increase the above estimate to provide for this contingency.

Oliver A. Hall Pessimistic About Farming Potential

While Zug had given a fairly optimistic estimate of farming possibilities, Oliver A. Hall, the design engineer for the Board, visited the valley a year later and presented a more sober assessment. About 300 farms were surveyed and open for settlement in an area that began in Anchorage and included the land between the Knik-Willow Wagon Road and the railroad. Of the approximately 90,000 acres of agricultural land, no more than 200 acres were cleared and under cultivation in the Matanuska Valley, with perhaps another 100 acres adjacent to Anchorage and Old Knik. All else was covered with heavy growth of spruce and birch trees, and heavy undergrowth and moss covering the ground. It required heavy work to

clear, remove the moss and all the stumps before the soil could be plowed.

Hall related that the farms were homesteads of 320 acres, filed under the old Homestead Law. Some of these had been relinquished and relocated in units of 160 acres each under the new law. He estimated that each farm contained an average of about four acres of cleared and cultivated land. Land clearing cost anywhere from \$60 to \$200 per acre, with burning the cheapest method. But since it rained a great deal, little burning had been accomplished. Most farmers were old prospectors and miners. Hall talked with a number of these people who told him that they would gladly sell to the first buyer to enable them to go back to prospecting or mining. If offered enough money, some indicated a desire to go Outside and buy farms there.

Hall pointed out that the area had a short growing season, from about the middle of May to the end of August. During the last three years peas planted in several gardens in the area had frozen while in blossom, and potatoes never ripened and had to be harvested while the vines were still green and then cured in root cellars. Wild grass grew to a height of four to five feet, but because of the wet weather it was difficult to dry. It also seemed to be less nutritious than hay imported from the States. Residents claimed that it took about four times as much native hay than the imported product to feed stock. Furthermore, after each cutting wild grass grew back shorter and shorter. Some individuals experimented with wheat, oats and barley, and while these grains would not ripen they made good feed for horses and cows.

The area possessed deep, black rich loam, averaging in depth from six to eight feet at Palmer and tapering off to about eighteen to twenty-four inches ten miles to the north. Hall concluded that "were this land located in a more favorable climate it could be made into profitable farms." He admitted that it might be possible, "after a course of thorough experimentation," to raise certain crops to maturity. But that lay in the far future.³³

War Department Reviews Work of the Board and Richardson

While the Board of Road Commissioners attempted to respond to the many requests for road and trail construction, the War Department assigned Major General T. H. Bliss to review the work of the organization thoroughly and analyze the controversies between Delegate Wickersham and Colonel Richardson. Bliss summarized Richardson's military career, noting that he began his Alaska service in 1897. Because of his extensive northern experience and capable performance he became the logical choice for the appointment as senior member of the Board of Road Commissioners for Alaska in 1905. Throughout his service, superior officers had always praised him for his leadership abilities and resourcefulness. All went well apparently as the Board "plodded along with its work" until 1910. Neither the Board nor its members incurred any enmity or criticism. In January, 1910 Wickersham charged Richardson with lobbying Congress for several pieces of legislation, among them the legislative council measure, which the Delegate opposed. From that time onward problems between Wickersham and Richardson mounted. In response, the War Department had undertaken several investigations and always completely exonerated Richardson. At no time were Wickersham's attacks on the Colonel sustained by the record. Bliss believed, however, that these attacks on the Board and Richardson would continue, due in part to Alaska's geography and its demography. The Territory's population was widely scattered over a huge area; many people lived in the most inaccessible places, and their economic successes or failures depended upon gaining access to navigable streams or harbors on the seacoast. For this they needed roads and trails, and the construction of these "was about as difficult as can be conceived of." The Board never had an adequate budget to satisfy all requests fully; in fact it did not meet the demands of many at all. Given these facts, it should have been clear from the very beginning that "bitter struggle and rivalry would result from these conditions." Still, taking these factors into account, Bliss was amazed that Alaskans nearly universally praised the work of the Board.

Major General Bliss Recommends Transfer to Interior

Still, the War Department had to anticipate that attack on the Board would continue indefinitely into the future. The time, therefore, was right to transfer the responsibilities of the Board to the Department of the Interior, a civilian agency already engaged in building the Alaska Railroad.³⁴

Richardson Asks That Transfer Be Delayed

Richardson, although he concurred with the transfer plan, appealed to the Secretary of War to be allowed to complete Alaska's major road network, "contingent, of course upon any developments which may make my services more valuable elsewhere." Several factors were involved in Richardson's appeal. He felt that his personal reputation was at stake, although he tried to believe "that this is secondary to my sense of duty to the work and to the wishes of the Department." He had served nearly twenty years in Alaska, embracing "years that have necessarily deprived me of opportunity in other fields which perhaps might have offered more promise of honor and reward than did the work in Alaska." Richardson also pointed out that his suggestion to the Territorial Legislation to create a road organization capable of assuming the functions of the Board had been well received. The Colonel thought that it might be more appropriate for the Territory than the Department of the Interior to take over the duties of the Board. Furthermore, once such an organization existed it might become the recipient of federal funds which the Department of Agriculture dispensed to states and territories for the construction of post roads.³⁵

Renewed Criticism of the Board of Road Commissioners for Alaska

While the War Department pondered the transfer plan, the Anchorage Chamber of Commerce protested that the Board intended to spend the greater portion of its funds on the Valdez-Fairbanks road "necessity

for which no longer exists" once the railroad was completed. The Chamber boasted about 300 flourishing farms comprising some 90,000 acres which were isolated from markets because of the lack of wagon roads. The citizens had asked the Board to expend \$170,000 for the season's work, but had only been granted a pitiful \$25,000. The Chamber suggested that the Board arrange with the Department of the Interior to build wagon roads under the direction of the Alaska Engineering Commission. The Chamber, in truly booster fashion, demanded that immediate action be taken to restore equity and fairness. The Valdez Chamber of Commerce disagreed with the opinions of the Anchorage Chamber and pointed out that the Valdez-Fairbanks road did not parallel the government railroad, in fact it was the only road to the interior through American territory. Richardson was caught once again in a controversy. He pointed out that the Board had no responsibility in law to build feeder roads for the railroad. Furthermore, the Department of the Interior greatly publicized its railroad project and minimized the labors of the Board. Worse, many residents held the Board "responsible for any failure of the railroad to immediately fulfill the extravagant expectations concerning it, by charging that our Board refused or neglected to build the necessary wagon road feeders." In short, Richardson concluded, "I find myself playing a 'losing game' personally and for the Department, and I see no way of overcoming it." He therefore requested to be transferred to Washington as soon as he had completed the annual report.³⁶

Richardson Resigns

Soon thereafter the War Department promoted Richardson to the rank of brigadier general in the National Army. Wickersham was displeased, but then delighted when the new general resigned as president of the Board of Road Commissioners for Alaska on December 29, 1917 and left the Territory shortly thereafter to assume command of the 78th Infantry Brigade, 39th Division, then at Camp Beauregard, Louisiana. Richardson served with distinction in France and next commanded American forces at Murmansk, Siberia. He returned to the United States in October 1919,

and with the mustering out of the National Army he was returned to his permanent rank of Colonel and retired on October 31, 1920. For his distinguished leadership in Siberia the War Department awarded him the Distinguished Service Medal in April 1922. He died in May 1929 at the age of 68 at Walter Reed Army Hospital in Washington, D.C.³⁷

Wickersham retired from the delegateship in 1920 but reentered politics in 1930 and served another term as delegate. Anthony J. Dimond defeated him in the 1932 Democratic landslide and Wickersham died in Juneau at the age of 82 in October 1939. In his book Old Yukon, published in 1938, Wickersham paid tribute to his old nemesis, stating that "the Richardson Highway, from Valdez to Fairbanks, is a fitting monument to the first great road-builder in Alaska, General Wilds P. Richardson."³⁸

FOOTNOTES

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CHAPTER FIVE

A NEW ERA FOR THE ALASKA ROAD COMMISSION

The resignation of General Wilds P. Richardson on December 29, 1917, closed the pioneering period of the Board of Road Commissioners for Alaska. Richardson, president of the organization from its inception in 1905, had supervised the road and trail work with remarkable persistence and dedication. His administration did not go uncriticized--most notably by the Alaskan delegate to Congress, James Wickersham, whose continued fulminations have already been detailed--but his direction achieved outstanding results, and established the pattern for road developments for the following decades.

America's participation in World War I severed Richardson's connections with Alaska and disrupted the progress of road construction in the vast territory. While Richardson served with distinction in France and Siberia, his successor as Board President, Major William H. Waugh, had to carry on with sharply cut appropriations. Alaska's needs could not compete with the war.

Lack of Funding and Changing Conditions

While the war period of 1917-1920 was characterized by a lack of funding (appropriations were \$100,000 for each of the last two years of the war as opposed to the \$500,000 Richardson had received for each of the last two years of his tenure), other events signaled momentous changes and developments for the future. The advances continued despite the war. Numbers of automobiles using Alaskan roads increased dramatically, and created pressures for suitable highways. Simultaneously, there were great leaps forward in the development of mechanized equipment for road work. Taken together, the two developments mark the war period as one of great significance in its foreshadowing of events, despite the low ebb of funding for the era that separated pioneer from modern times.

Harold Eide's Journey

The journey of Harold Eide, a tough young Norwegian who traveled the entire route of the Valdez to Prudhoe Bay Corridor in a continuous journey, separates the pioneer from the modern period. A friend in California gave him a map of a supposed gold strike. The year was 1917, and most of the more productive placer mining areas in Alaska had been worked out. Eide was ready to go and find his luck, and from an article and a book he wrote in later years, we know a great deal about his trek. Eide did not know that Nome, Fairbanks, and other lesser centers of production were settling into a slow decline. Each year the Territory's population dwindled further; there was little incentive for a man to go north to try his fortune. But Eide was footloose and unattached, and his friend's discovery had been made in an area that had not drawn many prospectors. It was a region where no major strikes had ever been made -- the rugged, remote Brooks Range which divides the forest-clad hills of the interior from the treeless tundra of the Arctic coastlands.

The young man had done some prospecting in the North earlier, so he already had some experience. From Seattle he steamed north to Valdez, enjoying enroute some of the grandest scenery North America offers along the famed Inside Passage route.

Once in Valdez, which was half buried under its heavy winter snow cover, Eide completed his preparations. If he waited until June, he could take a passenger coach, but he could not afford it. He intended to ski over the Valdez trail to Fairbanks, then proceed north from the interior city. His pack weighed 110 pounds when it was complete with grub, gear, sleeping bag, and blankets. A bit heavy, he reflected, but nothing a sturdy son of Norway could not handle. What is a journey of over 1,000 miles, when, at the end, there was a pot of gold to be gathered? Thus fortified by his expectations, Eide shook hands with a few well-wishers, shouldered his burden, stepped into his skis, and set off.

Outside of Valdez, the snow was deep and loose, and the going was consequently slow. The skier sloughed into the narrow canyon that provided the opening into the interior, after taking a last look at Valdez,

huddled into the snow below. "No chance of losing the trail, for the steep timber-clad hills on either side hemmed me in like going through a tunnel."¹

After three days of strenuous effort, Eide reached Glennallen and stayed overnight in the roadhouse there. This was a treat and a reward he gave himself for the ardours of the initial hard-traveling days, and the camp making along the trail at night. The roadhouses along the trail offered all the comforts a weary traveler could desire. Nothing fancy -- but the basics: a bed, warm water for a wash, plain food and lots of it, and a drink for those who were so inclined. Eide was not inclined. Roadhouse comforts were not cheap, and the prospector could not indulge himself too often.

Pushing on the next morning, Eide had the trail to himself. He encountered no other travelers coming down from Fairbanks and therefore guesses that they were snowbound up the line. At East Trail Junction the roadhouse was jammed, with travelers bound north and south held up there, waiting for freshly fallen snow to pack so they could get a move on. Eide exchanged trail lore with the others, then moved on along his "lonely way." His way may have been lonely, but it was efficient, as his progress proved. From time to time he was able to overtake freighting sleds bound for Fairbanks and speed on ahead of them. Sometimes the sled drivers were in distress, with broken sled runners which had to be mended under difficult conditions. Overloading was the cause of this. "It was a case of being too greedy," considered Eide.

Isabel Pass provided the next obstacle. For one with time to enjoy it, the summit provided a spectacular view of snow covered rivers and mountainous grandeur. He stopped at Ivar's roadhouse, but there were not beds available. The proprietor's wife invited him to lay out his sleeping bag in the kitchen and he fell asleep "to the soft gurgling of the teakettle and the sweet smell of bread baking in the oven." Ivar was a keen dog handler, and was quite willing to exchange sound dogs for ailing ones for any freighters who had the need. On their return trip from Fairbanks, they would usually find that their foot-sore canines had been restored to health through rest and Ivar's care.

Some travelers tried to keep their spirits high despite the hardship of the trail. Soon after leaving Ivar's, Eide encountered a group of merry-makers. He had been skiing into the night because the full moon gave ample light when he came upon a party gathered around a roaring campfire. They were entertainers and were whooping it up with music, whiskey and good cheer. "A man was sitting on something that looked like a throne atop a sled, swinging a whiskey bottle in time to music furnished by three bewhiskered, drunk performers dancing on the snow and playing their instruments at the same time." The man on the chair was going to Fairbanks to become the town's painless dentist; the others were cabaret performers. "Right now none of them felt any pain," Eide remarked ruefully, and he moved beyond the group rather disdainfully.

When the skier reached the Tanana River he had his best day's run -- a good 45 miles. The temperature hovered at about twenty below as he moved up the Tanana and then followed the Chena River, a tributary along which the gold town of Fairbanks was located. The little settlement was a glad sight and its twinkling lights signaled the welcome end to the first half of his journey. "All things have to come to an end, even the Valdez Trail." He went into the Blue Fox Cafe and ate a hearty, well-deserved meal. Other diners there gathered around, assuming he was the mail carrier, and called for the latest gossip from Valdez.

After four days' rest, Eide was ready to set out for the North. The road to Livengood, about 80 miles northwest of Fairbanks, was good, because mining operations were being carried on at that camp all winter. On July 24, 1914, N. R. Hudson and Jay Livengood had discovered gold on Livengood Creek. Hundreds rushed to the camp during the winter of 1914-1915. From Livengood to Wiseman there was a good trail because traffic was maintained between the new and the older mining center. Wiseman was one of the two places within the Arctic Circle where mining had been carried on: the other was in the Chandalar country to the east.

His next halt was at Coldfoot, then called Slate Creek. Today it is the site of a pumping station for the Trans-Alaska Pipeline, but in 1917 it was a dying mining community. The traveler bought himself a handful of cigars and some chocolate bars "to chew on my lonesome journey."

From this point his journey would be lonesome indeed. There would be no other travelers and no roadhouses beyond nearby Wiseman, and it was there that Eide purchased the last provisions he would be able to buy. Beyond this he would have to supplement his diet with game meat. His pack load now weighed 150 pounds but he had to provide all the necessary food to sustain himself on the remainder of the trail. He even bought a couple of pounds of nails to be used in the construction of a log cabin once he reached his destination. He rested for two days in Wiseman, but remained reticent concerning his plans. It did not do to talk too much, and he arose early on the day of his departure so that he would not be observed. "It was not smart to let people in on any new discovery or there would be too much company."

Eight more days of travel brought him to the place indicated on the sketch map his friend had given him. He set to work building his cabin, completing it by the first of July. His goal was to prospect through the summer, then return to Wiseman before winter.

Through the remaining weeks of the short subarctic summer Eide covered a good deal of ground while looking for interesting quartz outcroppings. He walked into the foothills of the Brooks Range near Anaktuvuk Pass and passed some time with the caribou-hunting Eskimos who had established a hunting camp there. (A few years later the Eskimos were to establish a permanent community at the same site. It was a good place for a village because it lay astride the caribou migration route.) The Eskimos were not having any luck at hunting that day, so Eide gave them a hand with his trusty Krag rifle. He brought down two animals and kept a small portion of the meat for his own use. The Eskimos were getting ready to journey to Barrow by way of the upper Colville River, and Eide figured he had better get back to Wiseman. But first he wanted to have a look at the country beyond the pass, the area we now call the North Slope, and recognized as one of the most valuable oil regions in the world. Eide thought the country would be dull, flat, marshy, and unattractive, and was surprised at what his first glimpse revealed. "The view was so different from anything I had seen before, so beautiful, so intriguing, and so challenging to a young Viking, I just had to investigate it

further." Lyricism came easy to the spell-bound man: "The midnight sun, low over the horizon to the north, painted hundreds of little lakes into fantastic reddish gold. Slightly to the east, dozens of tiny fingers of water wiggled their way among the rocks to make the Sag River a contribution to the Arctic Ocean." Eide sat by his campfire fascinated, munching on caribou, and drinking in the view. "Caribou grazed nearby, unafraid of me. A couple of bears ambled past, down the slope toward the river, evidently bent on having fish for supper." He was no longer anxious to return to Wiseman. Instead he would cross the slope and have a look at the Arctic Ocean which was only 80 miles to the north.

Eide found the headwaters of the Sag River and began following its course to the sea. At first the going was good, the ground was firm and rocky, and the tall wind-blown grass was no impediment to his walk. The country seemed lush and prolific. Where, he mused, is the much discussed "desolate Arctic"? Everywhere there was wildlife within view - wolves, bears, caribou, foxes, and smaller animals. After camping overnight, he discovered his first hardship in overland travel. It was not anything very menacing, just water. Spongy ground, interterminal swamps, and a network of small and larger lakes that seemed as complex as a particularly devised maze. He was up to his rear end in water much of the time, and had to cross and recross streams whenever he spotted a grizzly bear along the banks. It was a cold, wet and fatiguing hike -- and the country appeared less attractive now. "I could feel the chill of wet clothes sticking to my body like the grip of death." That night he managed to find a little higher ground for a campsite. He got a brisk fire going, and soon his clothes were drying, coffee was brewing, and a caribou steak was sizzling in the pan. Things were looking up and there was even music -- self-produced on a harmonica he had carried with him all the way from Seattle. "The midnight sun spread its peace over the tundra with soothing colors of red and gold reflected on the ponds and river."

At the end of the next day, the young traveler reached his goal -- the Arctic coast. He blazed up a huge campfire to dry out his clothes, and by a remarkable coincidence, it attracted the attention of traders aboard a passing schooner. There were probably only about a half dozen

schooners navigating the entire arctic at the time, but Eide had the good luck to encounter one of them and got a ride to Barrow, and eventually to the outside. His odyssey had been concluded successfully; the Valdez-Prudhoe Trail had proved to be serviceable.

Eide's adventure of 1917 has been described at length here because it illustrates the condition of some of Alaska's roads and trails rather effectively. In 1917, Eide's mode of travel on the Valdez-Fairbanks Road was nearly unique. Off that major corridor to the interior, however, Alaskans were still accustomed to going by any means possible: on foot, by skis, by dog or horse-drawn sled, or by wagon.

The Coming of the Automobile

Although World War I did not touch Alaska greatly, those years were transitional ones in many respects. Regular automobile and truck traffic loomed just over the horizon. Soon it would be possible to travel in comfort in one's automobile or by hired motor vehicles all the way from Valdez to Circle. As for crossing the Brooks Range, well, who would want to do that? Most Alaskans were content to have the road end at Circle.

Developments in the road system that were accomplished from 1918 to 1924 met some of the expectations of Eide's fellow travelers. Certainly the automobiles increased in numbers. Yet progress seemed painfully slow in expanding the sparse network of roads suitable for wagons, much less mechanized vehicles. Most of the thin ribbons marked as summer or winter trails on the maps did not blossom into roads through the work of the Board of Road Commissioners in those years. In fact, if maps had accurately reflected the changing conditions, they would have shown the obliteration of many trails and the impassability of large sections of the roads. International events and the ravages of nature were the chief setbacks to the territory's road program.

In 1917, after the United States joined the European war, the American Army's highest priorities did not include the maintenance of Alaska's transportation system. Several years passed before cuts in appropriations were restored to pre-war levels.

A history of Alaska's roads, however, cannot be limited to considerations of the technology of the building and maintenance of surfaces, culverts, and bridges. Roads are as much an index of social change as they are of technological progress. Of all the changes in patterns of national life that occurred in the early decades of the twentieth century, none has been more dramatic and far-reaching in its results than the success of the automobile. Henry Ford's first automatic assembly lines started up in January of 1914, thereby determining the future of road transportation. Years before, when autos were still being made individually, Thomas Alva Edison announced that "the horse was doomed," but when Ford coupled his assembly methods with a five dollar daily wage for his workers, he initiated a sweeping social revolution.²

Against this background of transportation advances, it is interesting to review the perceptions of the Board of Road Commissioners for Alaska as the automobile revolution moved north at an ever-accelerating rate. Early mentions of the automobiles in the annual reports have a foreboding ring. At first glance it appears as if Board members felt themselves burdened enough with the formidable logistics of the territory's expanse and had reason to dread an innovation that threatened to add further to their heavy workload. Actually, the writers were paying lip service to duties to provide military routes. They also, however, had a responsibility to connect mining centers to the major river banks. Their reports cautiously denied any responsibility for the new social phenomenon: "The use of automobiles had not been encouraged by the Board, but the number of such vehicles in Alaska is growing rapidly from year to year."³ This cautious disclaimer of any intent to foster automobile use in 1918 had been made in earlier reports and was to be repeated, but the members were not really ignorant of events nor resistant to a clearly determined course of history. While the Board conceded that automobile use "has greatly increased the cost and difficulty of maintaining the roads," they also realized the "the value of quick transportation is recognized."⁴ Obviously the conscientious board understood its responsibilities: "It is hoped that sufficient funds may eventually be appropriated to permit the Board to undertake a general prospect for the

sufficiency of all the most important roads."⁵

Regular Automobile Travel Comes to Alaska

By 1918 automobile stages regularly used the Valdez-Fairbanks Road and the Willow Creek-Chitina branch during the summer months. Gravel surfacing and improvements in grading over the previous two years made the wagon road suitable for stage vehicles, but the Board did not claim to have produced a road suitable for use by private automobile drivers. "Much improvement in the way of surfacing will have to be done before these and similar roads throughout the territory can be claimed as automobile roads," admitted the Board.⁶

Road and trail statistics were fairly impressive. A total of 1,006 miles of wagon roads, 673 miles of sled roads, and 2,346 miles of trails had been constructed, "giving access to practically every developed portion of Alaska."⁷ Of course, much of the wagon road mileage had not been surfaced, but approximately 300 miles had at least been surfaced with gravel.

The Alaska Railroad

Another demand for increasing transportation facilities during the war period was not yet urgent in 1918, but its pressure cast a long shadow. The construction of the Alaska Railroad from Seward to Fairbanks was well underway. Conceivably, the railroad's use could reduce the traffic burden on the road, but it would also create demand for more roads elsewhere. Every community near the railroad route considered that the Board was obligated to provide a feeder wagon road to the railroad. Such feeder roads made economic sense, as the Board acknowledged, but after making an equitable allotment of budgeted funds to communities adjacent to the railroad, much remained to be done. "It is believed," the Board reported in 1918, "that the construction of the feeders constitutes a separate problem on which special provision should be made by appropriation or otherwise."⁸ Clearly the Board was not simply passing the buck to

Congress or other agencies in pointing out this problem. While Congress might be reluctant to provide a substantial increase in the road appropriation when railroad construction was requiring heavy funding, the need for feeder roads was a logical result of the railroad. Thus, in the short run, at least, the railroad promised to create more difficulties for the Board and its slender budget than it alleviated.

The Alaska Road Commission Mechanizes

Brighter prospectors of the 1918 Report were included in the "machinery and equipment" section. Machinery purchased in 1918 included:

- 2 tractors, 12-25 horsepower
- 1 road grader, 8 foot
- 3 road graders, 6 foot
- 4 road drags, 3 way
- 4 auto trucks, heavy⁹

In the previous season employees of the Board had tested two old tractors of the track-layer type on a hundred-mile stretch near Fairbanks and demonstrated the adaptability of these machines for pulling graders and drags. Improvements in the Valdez-Fairbanks Road fostered the potential value of tractors. By 1919 the engineers determined that ten percent of the road could be maintained with the aid of tractor power. The logistics were irrefutable and echoed Thomas Edison's forecast for the doom of horses. "At present each tractor is doing the work of eight horses, at a daily operating cost equal to the cost of feeding three horses."¹⁰ The test showed conclusively that the tractor had numerous operating advantages over horses which only worked nine months a year, but ate all year long. Additionally, the tractor required fewer men for operation; fewer men required fewer supplies. And a tractor's wide wheels performed like a roller in forming a hard and compact roadway. In 1919 the Board planned to double its machinery inventory.¹¹ Clearly, mechanization had arrived in Alaska.

One problem characteristic of the period was a scarcity of labor. In 1918 some work sections were understaffed by twenty to thirty percent. The availability of Native labor was beneficial. In 1918, the Board

employed some 40 Natives on the Valdez-Fairbanks Road alone, and the practice of hiring continued over the entire history of the Board of Road Commissioners for Alaska. As a cash benefit to the Native village economies, the seasonal hiring of Natives compared to the later employment of village labor by the Bureau of Land Management as forest fire fighters.

Annual Report

From a study of the Board's annual reports, a historian could summarize the superficial history of road and trail construction from 1918, but only in a shallow fashion. The established form of the document and the balance demanded by its purpose dictated a pattern of reporting. Reporters had to show pride in their actual accomplishments without diminishing the urgency of future needs. No overt deception was practiced in achieving such a balance. Roads and trails were never finished. Maintenance demands followed hard on the completion of any new construction. And in good years or bad, more money was always welcome, indeed needed.

But the historical record shows what the annual published report does not reveal. Extensive correspondence, masses of field diaries, and reconnaissance reports are rich in the detailed underpinnings of the laconic annual summaries. Such records speak of frustrations, triumphs, and much grueling drudgery by the road personnel.

The Death of Trader Richard Feltham

Consider the tragic story of Richard Feltham, a trader of McDougall who took a pack train of supplies into the Cache Creek Mining District (Susitna) where 30 small mining camps awaited provisioning. The trail was not good. Feltham had discovered that in May, 1917, when he lost his way, wandering around for 12 hours after losing sight of the trail signs before returning to McDougall without delivering his goods.¹²

Yet in June of that year he tried again. After several days, men

went to search for him. "In the neighborhood of the old Hungryman Camp evidences of the man to find the way were pitiful to see," wrote one rescuer.

Blazes on the trees running through the swamps in different directions showed plainly the vain efforts made to find a most obscure trail that would lead to Cache Creek. Finally, through the faithfulness of his pack horse, that was found standing in the trail with the saddle turned under him, attention was attracted to the man rolled in his blanket, about 50 feet off the trail. Stimulants aroused in him a recognition of his rescuers . . . but the effect was but temporary, and he died within a few hours.¹³

Tragedies can have meaning. To the miners of Cache Creek, the trader died because of the government's callousness and ingratitude. "The death of Dick Feltham," wrote one miner, "is grim evidence of the crying need of roads and trails in our district."¹⁴ Over 200 men "are striving to develop a country rich in natural resources but greatly handicapped by the lack of roads." How can legislators and other responsible officials "stand back and permit a continuation of such a condition that calls for the occasional sacrifice of a life given in an effort to develop a country"? For 12 years the miners had worked in the area. Now they cried in anguish: "We don't ask for boulevards and parks, but we want help in the construction of a plain, every-day dirt road that will guarantee to get us home to safety...and won't leave us to perish as it did poor Dick Feltham."¹⁵

Cache Creek miners had petitioned the Board of Road Commissioners in March, 1917, two months before Feltham's death. They had also petitioned the Territorial Legislature, asking their representatives to memorialize the Board of Road Commissioners. Eventually the miners got their road.¹⁶

John H. Joslin Reports

Other records reveal less dramatic episodes of road work. There is, for example, the work of John H. Joslin, the supervisor for the Circle road work during the summer of 1918. He established his first base camp at Birch Creek ferry in June. With four men, he repaired the road from

Circle to three miles below Miller House. "The work cost nearly double what I expected for several reasons, one of which was . . . the poor quality of men available." The war affected local manpower: "I found it nearly impossible to get or keep the most indifferent labor, and this is true of all interior Alaska I believe."¹⁷ Besides reporting to his supervisor on his ditch clearing and other work, Joslin made recommendations for regrading certain stretches and relocating others. And for want of anyone else on the spot more expert or impartial than he was, Joslin also advised on the district's long-range prospects: "Dredging and hydraulic operations . . . from all appearances will continue for many years, giving employment to about 200 people."¹⁸

The Cache Creek and Circle documents illustrate the prevailing attitude toward roads and trails. Local residents were optimistic, certain that a great economic future was the destiny of their region. Personnel of the Board of Road Commissioners had to beware of unsupported hopefulness, yet were dependent upon the information derived locally. The situation shows the uncertainty of the entire road and trail planning process, particularly in the mining regions of Alaska.

Predicting Mining Regions' Longevity Hazardous

Even in normal times, the prediction of a mining region's longevity was hazardous, and no one anticipated the impact of the war on gold mining, the chief industry of the interior. Early in the war, mining activities diminished because of the scarcity of labor. But the increased prices of equipment and rising pay scales were even more detrimental than the labor shortage. By war's end, mining had become unprofitable on any but the richest claims. The result was a sharp drop in production and a dwindling of population that continued until World War II construction prospects created a boom period again.

Improve Transportation to Spark Economic Revival

Alaskans were not immediately aware that the war had altered economic

and demographic conditions so severely. If mining and other industries were declining, there were a number of ways to spark a revival. Of these ways, the improvement of transportation headed the list. It was easy and sometimes reasonable for Alaskans to equate trail and road improvements with their economic survival. Indeed, in some regions, like the Chandalar District north of the Arctic Circle, beyond the reach of roads, good trails, or easily navigable rivers, a promising mining industry languished for lack of transportation. Even basic food provisioning was difficult for miners along the southern slope of the Brooks Range, but despite the area's remoteness approximately 200 men stampeded to the region in 1906. Some placer gold was produced, but a rosy, long range future was predicted for quartz mining. This, however, required more machinery, particularly a stamp mill to crush the quartz. Miners were given a trail of sorts in 1910, and invested in a giant Allis-Chalmers four-stamp mill which they shipped via the Yukon River to Beaver. From Beaver the distance to the mines was 115 miles, a long haul for a 28-ton machine.¹⁹

Sporadic attempts over the next 20 years to get the huge mill to the mines failed. Such equipment required a decent wagon road. Parts of the machinery were dismantled and reached their destination. Heavier parts were left along the trail. The mill was never placed in operation, and the quartz prospects of the region were not realized despite the investment of \$200,000 by William Sulzer, the mine's chief backer.

A reduction in freight rates was the chief argument for improved trails and roads. Accurate determinations of such saving were not easily gained, but it was reasonable to assume that all road improvements reduced freight rates. For many years the Board's annual reports featured figures gathered in 1913 which "indicated that the direct savings in cost of transportation of freight during that year due to the construction of roads by the Board was \$2,144,117."²⁰ But this money savings, reports affirmed, did not tell the whole story: "It is doubtful, however, if anything like that amount of freight would have been transported without the roads, and the indirect loss which would be occasioned by the restriction on output and development if the roads did not exist cannot easily be estimated."²¹

Automobile Triumphant

By 1919, the automobile revolution had occurred. It carried mail on 160 miles of the Richardson Road (in that year the Valdez-Fairbanks Road had been named for the Board's first president), from Chitina to Fairbanks. Other horse-drawn traffic diminished fast: "Approximately ninety percent of the traffic on the main wagon roads is handled by motor, which has greatly increased the cost of maintenance."²²

That the very triumph of the automobile and the road's capacity to handle it carried a stinger in its tail was ironic, but understandable. Greatly increased costs of road maintenance were due to the technological changes in transportation which had occurred and the success of road engineers in adapting to such changes.

The Board had not exaggerated the quality of Alaska's roads, conceding that their roads "would not be considered good wagon roads in most sections of the country."²³ Plainly, automobile drivers were using the roads despite their inadequacy because the vehicles saved a significant one-third the cost of horse-drawn traffic per ton per mile. Low-standard wagon roads might be hard on automobiles, but the cost of feeding one horse for a day had reached a prohibitively high rate of \$5.00. And the efficiency of animals remained what it had always been.

Horses and Tractors

The Board's mechanization progress lagged behind that of the public and freighters for a time. It only acquired one new tractor, a Truxton car unit, and two new road scrapers in 1919. But the continued reliance on older equipment and horses was necessary because of limited funds. Appropriations for 1919 had been slashed. Road repairs cost three times what they might have, because tractors could not be purchased to replace horses. A report on dragging summed up the efficiency of tractors:

In previous years it has been impossible to properly drag the many miles of road which are included in the section of each crew. When

dragging was attempted, the roadhouse bills at \$6 per day per man amounted to such a sum that it often became such an expensive operation that proper dragging was not practicable.

The three 12 to 25 horsepower tractors and three-way drags have proven a great success, one trip over the road being equivalent to as many as four trips of the old type horse-drawn drag.

The road between Fairbanks and Tenderfoot (75 miles) was maintained with two of these outfits last summer, and they were also used on road-grader work. Late in the summer a few trips were made by another tractor-drag unit operating between Tonsina and Willow Creek, 25 miles. This summer one of these units has been engaged all the time on dragging, none between Tonsina and Sourdough, 70 miles, and the other between Fairbanks and Salchaket, 35 miles. The third outfit has done very little dragging but is working very successfully south of McCarty, grading new road.

Attached to the maintenance unit is a trailer of sufficient size to carry supplies of all kinds, a tent, a small cook stove, provisions, and the bedding of the two operators who are thus enabled to pitch camp at the end of the day's run without incurring prohibitive roadhouse bills.

The average cost of the operation of these outfits was \$1.36 per mile dragged, and \$12.87 per day of eight hours. During last summer an average of nine miles were made per day, but this spring the average is being raised one mile. The average number of miles obtained from a gallon of distillate and gas is 0.77 miles, while the lubricating oil used averaged 98 miles per gallon.²⁴

The Board of Road Commissioners for Alaska bought equipment as it could in subsequent years, and enjoyed a windfall in surplus army equipment in 1920, including six two-ton trucks, six one-ton trucks, and six tractors.

Maintenance Costly

Nature set certain obstacles to cost effective road maintenance. For all its scenic attraction then and now, the first 18 miles of the Richardson Road out of Valdez (as already mentioned it was named after the Board's first president in 1919) consumed a large chunk of the budget year after year, and even in 1983 it still was expensive to maintain that stretch of road.

The Board expended nearly \$30,000 each year to maintain the picturesque mountainous part of the road that included Keystone Canyon. In

July, 1919, for example, floods near the canyon wiped out 15 miles of the steepest part of the Richardson Road. Seemingly year after year, torrential glacial streams did most of the damage during the spring and summer and kept crews busy throughout the season. A relocation of a 10 mile stretch of road would have eliminated much of the difficulty, but new construction funds were not available.

The 1919 report graphically described the flooding which occurred that summer:

Route 4B. Valdez-Ernestine Road (63 miles). -- three crews were engaged on this route throughout the entire season. During July and August the stream from Valdez Glacier destroyed one pile bridge in the vicinity of Valdez and threatened several others and the intervening road; the road on the alder flat, at the head of Keystone Canyon, was inundated and partially destroyed, necessitating a new location on the hillside. Bear Creek, in mile 18, filled its channel with 20 feet of boulders, gravel, and debris, washed out one of the bridge trusses, and destroyed both approaches, and at Beaver Dam, the Tsaina River inundated all of mile 42, including the sites of the road house and telegraph station. These destructive inroads by the rivers necessitated new location at a time when the crews were already busily engaged in important maintenance and river control. Due to the great scarcity of labor, the commanding officer at Fort Liscum detailed some 20 men for work on the washout in mile 18 and others for duty on the pile driver at Valdez. In the fall a section of mile 8 was destroyed, and a detour was constructed on the flat a short distance to the north. In all there was a considerable amount of new construction necessitated by washouts. As these sections of new road are all short and were built hurriedly with the object of keeping the road open, the location was not in all cases of the best. In fact, only a small portion of the summer's work can be considered of permanent value.²⁵

Nature often conspired to work against the Board's efforts, and often it proved difficult to convince members of Congress to appropriate larger sums of money for the work in Alaska. The Board, therefore, decided to present a comprehensive ten-year construction and maintenance program to Congress in 1920. It hoped that such a plan might effectively show Alaska's needs and convince Congress to appropriate the necessary funds.

FOOTNOTES

1. All the quotations in this section on Eide's journey are from his reminiscences entitled "I Hiked the Pipeline - in 1917," Alaska Magazine, September, 1974, pp. 12-13, 49, 51, 53.
2. Lloyd Marvin, Not so Long Ago (New York: Random House, 1949), pp. 222,342.
3. Board of Road Commissioners for Alaska, Annual Report of the Alaska Road Commission, Fiscal Year 1918, p. 1990. Here-after cited as Annual Report of the Alaska Road Commission and year.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid., 1989
9. Ibid., p. 3842
10. Ibid.
11. Ibid
12. Statement of Chas. R. Harris, R. G. 30, Federal Records Center, Seattle, Washington.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. John H. Joslin to Captain John Zug, October 25, 1914, R. G. 30, F.R.C., Seattle, Washington.
18. Ibid.
19. William Sulzer Papers, University of Alaska Archives, Fairbanks, Alaska; William R. Hunt, North of 53°: The Wild Days of the Alaska-Yukon Mining Frontier 1870-1914 (New York: MacMillan Publishing Co., Inc., 1974), pp. 233-239.

20. Annual Report of the Alaska Road Commission, Fiscal Year 1919, p. 2099.
21. Ibid.
22. Ibid.
23. Ibid., p. 3871.
24. Ibid., pp. 3872-73.
25. Ibid., pp. 3875-76.

CHAPTER SIX

THE BOARD OF ROAD COMMISSIONERS FOR ALASKA, 1920 TO 1925

In 1920, the Board formalized the end of the war, and in fact, the entire period of its 16 year history, with the announcement of a comprehensive ten-year program. No more obvious sign of maturity could be offered than in formulating this long-range plan. The Board's plan was an affirmation of its belief in Alaska's eventual prosperity despite the hard times, and was also an expression of disdain for the practice of responding haphazardly to emergencies. Sound standards of engineering management dictated such a program; so did standards of political management. It was no longer enough for the Board to find satisfaction in keeping its limited mileage of roads and trails open and adding a few miles each year. The Board believed that despite Alaska's loss of population during the war, and the collapse of gold mining, the territory would recover, and a comprehensive road system would foster future growth. It is true that the Board had proposed a similar but less comprehensive road plan in 1913. It had recommended the expenditure of \$7,250,000 over the next 10 years. Through the year 1920 the amount actually appropriated, however, had totaled only \$1,645,000, a sum which did not even come close to reaching the proposed goals. Only thirty percent of the monies requested for the plan's first seven years had actually been received. Funding had lagged even before the war emergency, which had disrupted expectations even more severely. In fact, during the war large sections of the old system were not even kept in repair, and some sections even became impassable.

Board's Ten Year Program

The new planning proposal, however, was different. It represented the first real effort at long-range planning by the Board and its commitment to Alaska as well. For these, and the reasons stated above, it should be noted in full:

During the 16 years of this Board's existence, slightly over a thousand miles of road (besides much greater lengths of sled road and trails) have been constructed and maintained, with a cost of slightly over \$5,000,000. Two policies of this Board through all this period have shown the highest wisdom: first, that of building successively trail, sled road, and wagon road as the traffic along a communication line justified; second, building largely with local labor. These two policies assured building along sound lines, resulting in roads carrying traffic as soon as completed. To import labor to construct roads would make possible the building of roads away from centers of present or even prospective population and serving, when completed, only as a monument to the builder. The soundness of the Board's policy is further emphasized by a survey of roads now in use. Under no possible conception can any part of the present road and trail system possibly be abandoned.

The following sets forth a ten-year program that will carry forward substantially the reviving industries of this territory and will provide the government railroad with a generous contribution of traffic.

To prepare any program of road construction, both the topography of the region traversed, and the economic return expected must be studied. In topography alone, the glaciers, glacial streams, swamps, elevated snow-covered mountain ridges, frozen soil and dense vegetation offer obstacles of remarkable obstinacy. As to economic returns, the traffic existing and prospective must be estimated. The building of roads through known mineralized but undeveloped areas to reach developed areas is sought.

To be considered at the same time is the location of projected roads in relation to other lines of traffic -- that is, waterways, and railroads. In the present state of Alaska's development, it is unwise to parallel such lines of traffic with wagon roads. It is especially aimed to build as feeders and in a few cases to cross divides and link together existing lines of traffic. Roads planned upon such a conception will give the greatest return with a minimum of cost.

Almost of equal importance with the above considerations come the fitting of the program with the funds that are requested. This modest program can be constructed within the estimated cost and time. It would require only a draftsman's service to cover the map of Alaska with a network of roads that could not be constructed with any reasonable appropriation within less than 50 years. This estimate is therefore made with a view of being a realizable program with the funds and time reasonably available. This program of development covers that desired during the next 10 years, 1921 to 1930, inclusive. The new road mileage which is projected totals 700 miles. These roads are termed 1921 roads. This will call for a rate of construction of 70 miles per year. The cost of these roads to construct

and maintain through this period will average \$10,000 per mile. This cost is an average for all districts. The roads selected for construction during this period are along well-defined lines of travel which have received previous development as trails and sled roads and whose worth is unquestioned.

In the work proposed for the next 10 years, three classes of road building operations will be carried on. First, the new construction planned as arterial or feeder highways and totaling 700 miles for the period will be carried out. These roads will, in the main, follow old lines of development. These are described in detail below. Second, roads, termed development roads, the value or location of which is not yet fixed will be constructed from time to time with a limited apportionment of funds. A number of roads of this type are described hereafter. Construction of roads of this type provide the necessary flexibility to meet new conditions. At a later time, these development roads may develop into arterial roads. Third, the present road and trail system must be kept up. This requires an expenditure for maintenance which is estimated from past expenditures of the Board, to be \$200,000 per year. Detailed estimates of such maintenance is given below.

In presenting the program in detail, it is necessary to outline briefly the physical features of Alaska and the lines of communication already established. The portion of Alaska now under development naturally divides into the following districts:

1. Southeastern Alaska, embracing the island and coastal mainland east of the one hundred forty-first meridian. This district is served almost entirely by waterborne commerce and no new construction is planned under this program. The necessary short tributary roads to settlements not already constructed can be built as development roads.
2. Copper River Valley, embracing Cordova, Valdez, and Kennecott and served by the Copper River Railroad extending to the summit on the Fairbanks Road.
3. Susitna Valley, embracing the country traversed by the Government Railroad in the Susitna Valley, including Seward, Anchorage, and Matanuska. The Alaskan Peninsula and Kodiak Islands are closely attached in development to this district and are included therein.
4. The Kuskokwim, embracing the Lower Yukon Valley and the valley of the Kuskokwim west of the Alaska Range. This district is very meagerly provided with transportation facilities and most important projects of this program aim at relieving this situation.
5. Yukon District, including Fairbanks, and the Yukon and Tanana valleys. This region is of high importance for development,

as here must originate the most important tonnage for the Government Railroad.

6. Nome district, 1921 roads;

Project symbol	Name of Road	District	New construction Miles	Remarks
A	Talkeetna, Takotna, Ophir, Ruby	Susitna and Kuskokwim	280	This road reaches from Ruby, on the Yukon, through the most promising mining district of the Kuskokwim, through Mount McKinley Park, to Talkeetna on the Government Railroad. Sixty miles of this route are already under construction. The most promising mineralized region of the Upper Yentna Valley is reached.
B	Davidsons Landing Kugarok, Candle	Nome	135	This road runs from tidewater through the Kugarok mining district to Kotzebue Sound at Candle. It is of the highest importance for the further development of the Seward Peninsula.
C	Roosevelt, Glacier, Riley Creek	Yukon	75	This road connects the important Kantishna mining district with the head of navigation on the Kantishna River and with the Government Railroad at Rileys Creek.
D	Eagle 40-Mile Boundary	...do...	50	This road is an extension of an existing road and improvement of a sled road in the 40-mile mining district from Eagle. Connection will be made at the Alaska-Yukon Territory boundary with the Miller Creek Road to Dawson.

E	Chatanika, Miller House	...do...	80	This road connects two old road commission projects, enabling traffic to pass from Circle on the Yukon to the Fairbanks district and serving as a very important feeder to the Government Railroad.
F	Rampart, Hot Springs	...do...	21	This road joins two old projects connecting Rampart on the Yukon with Hot Springs on the Tanana.
G	Gulkana, Chistochena	Copper River	40	This road is an important tributary to the Fairbanks Trail, is a part of a future main artery road from the Copper River Valley to the Yukon at Eagle, and makes accessible the promising Slate Creek mining district.

Under development roads, the most important possible projects are noted below:

Alaskan Peninsula. -- Wide Bay-Oil Fields, 25 miles. Reaches from Tidewater at Wide Bay to the oil fields now being prospected near Cold Bay.

Kenai Peninsula. -- Kenai-Homer, 70 miles. This road, with the completion of the Kenai mile 29, will give a system of roads to the Kenai Peninsula reaching every district and making connection with the Government Railroad at mile 29.

Susitna Valley. -- Talkeetna-Iron Creek, 45 miles. This road will connect an important mining district in the Susitna Valley with the Government Railroad.

Copper River Valley. -- Abercrombie (Copper River R.R.) - Katalla, 45 miles. Makes accessible the Katalla oil field to the port of Cordova, and especially necessary in case a railroad extension is not made.

Katalla-Cape Yaketaga, 80 miles. Reaches a new oil field now being prospected and otherwise inaccessible for development.

Yukon Valley. -- Forty Mile to Tanana Crossing, 60 miles. An extension of the Eagle-Forty Mile Road passing through an important mining district and reaching the valley of Tanana.

Susitna Valley -- Government Railroad-Valdez Creek, 50 miles. This road makes accessible to the railroad the important Valdez Creek mining district. This district is now reached only by a 70 mile trail from Meiers on the Richardson Road.

Copper River Valley -- Nizina River to Nizina, 10 miles. This will include the Nizina River Bridge and make accessible the upper Chitina Valley to the Copper River Railroad.

Strelna to Kuskulana River, 16 miles. This includes the improvements of existing roads built by mining operators and makes accessible an important mining district in the upper Kuskulana Valley.

Chistochina-Chisana, 45 miles. This makes accessible the Chistochina Valley working to the road projected on this year's program from Gulkana to Chistochina.

Yukon Valley. -- McCarty to Forty Mile, 135 miles. This road would complete a through road from Dawson and Eagle to Fairbanks, and would pass through a very promising and undeveloped agricultural region in the upper Tanana Valley.

Circle to Fort Yukon, 80 miles. Makes accessible both winter and summer the important trading post of Fort Yukon. This settlement of 50 white and 500 natives is now reached by water in summer, and with difficulty over the ice on the Yukon in winter.

Chatanika-Livengood, 56 miles. This road makes accessible the important mineral developments around Livengood.

Beaver-Caro, 75 miles. Provides a line of traffic between the Chandalar mining district and the Yukon.

Fort Gibbon-Arctic City, 100 miles. Connects the valley of the Koyukuk with the Yukon Valley.

Eagle-Seventy Mile, 40 miles. Connects the Seventy Mile mining district with Eagle.

Nome District. -- Nome, Kugarok, 60 miles. Connects the Nome district with the Kugarok district and with the Davidson's Landing-Candle Road projected under this year's program.

Southeastern Alaska. -- Skagway-White Pass, 13.5 miles. This is an important international road, and by cooperative effort on the part of the Canadian Government would make travel by road from Skagway to White Horse possible.

Taku Landing-Boundary, 22 miles. This road, if prolonged by the Canadian Government, would permit travel from Juneau to Lake Atlin.¹

Public's Role in Planning

Before discussing the Board's accomplishments under its new plan, something more should be noted of the public's role in road planning. The Board of Road Commissioners was a division of the U. S. Army, and was not answerable to Alaskans, yet the Board did try to respond to the public it served.

Alaskans have never been shy about making demands on the federal government. When the proprietor of Circle Hot Springs, a much frequented resort, asked for a road, it was with a sense of outrage at its non-existence. As F. M. Leach explained to Alaska's Governor Thomas Riggs: "I am appealing to you for assistance in obtaining a road to the Circle Hot Springs, not as a favor, but out of justice to the people of this part of Alaska, and out of consideration for the development of the most permanent resources in the Territory."²

Leach went on to complain that the Board of Road Commissioners for Alaska built a wagon road from Circle to a point 2 1/2 miles below the Miller House -- a distance of 46 miles, at a cost of over \$100,000, yet failed in their promise to provide feeder roads to the side creeks and the Circle Hot Springs. Freighters and merchants had benefited from the road built and opposed the link to Circle Hot Springs, a region of immediate value to its agricultural products and future promise as a mining district.

Governor Riggs asked the Board members to consider Leach's request and they assigned John H. Joslin to make an investigation.³ Joslin reported on the self-serving nature of some of Leach's statements, and the absurdity of giving a priority to Leach's little-used road over the nearby Deadwood road, then under construction, or over needed repairs on the main Circle Road. Joslin did recommend a small allotment for Leach's needs, but the Board pleaded lack of funds and refused to help Leach.⁴

Similarly, residents of the Circle mining district petitioned the Board in 1922 for faster work on the Chatanika-Circle Road, citing the hardships imposed by the completion of the Alaska Railroad:

For the past 28 years this region has been a continuous producer of gold, one of the largest producing camps in Alaska. Its transportation accommodations have been by river boats to Circle, on the Yukon River, some 50 miles from the mines. These mines, already located, will be steady producers for 28 years more, under favorable conditions. But the completion of the railroad to Fairbanks and the extension of the White Pass Railway to the Mayo silver district, which has been announced, will eliminate the river traffic passing Circle. This, in all probability means that freight for this section of the river will be by an occasional boat, whenever tonnage will justify a trip, which will necessarily be at a higher tonnage rate than was charged when a regular line of boats passed Circle. Thus the railroad largely displacing the boats as freight carriers into the interior of Alaska works a decided hardship upon the residents of this district until an auto-truck road is completed some 80 miles from the end of the railroad at Chatanika to the Miller House. These conditions, we believe, justify us in asking consideration in the matter of road construction, even taking precedent over other sections of the interior of Alaska not adversely affected by the completion of the railroad. Therefore, we, the undersigned residents of the Circle District, most humbly pray that the Alaska Railroad Commission do everything within its power to hasten the completion of the auto-truck road from Chatanika to Miller House.⁵

The Board's superintendent for the Fairbanks district, Hawley W. Sterling, approved the petition and asked the Board to allot as much money as possible to the project.⁶ But Colonel James G. Steese, the new president of the Board, cautiously replied to the petitioners that "We have made as large an allotment as we can with our limited appropriation. Until Congress greatly increases our appropriation, it will not be possible to close this gap (the automobile road from Chatanika to Miller House) as rapidly as we should like to do so."⁹

And so it went, as the case histories show. Everyone suffered the frustrations of the reduced road appropriations, and the Board was just as ardent as the governor and residents in believing that good roads meant prosperity.

New Equipment

Some of the bleakness of 1921-1922 was dispelled by the gains in equipment. In 1922 new equipment included:

- 3 Ford Trucks
- 1 moving machine
- 1 tractor-drawn road grader
- 1 cylinder reboring machine

But the true equipment bonanza was in the acquisition of substantial quantities of surplus U.S. Army equipment, including 15 Dodge tractors, 6 White tractors, and 9 Holt tractors.

For the first time in its history the Board had enough equipment for work anywhere in Alaska. With some pride Board President Steese listed all the equipment owned in his 1922 report. He must have reflected upon the progress he could make if he had money enough to keep all the machinery going throughout the working season:

6 tractor-drawn road graders	5 winches
17 horse-drawn road graders	28 Dodge trucks
3 air compressors	10 Ford trucks
1 Bucyrus drag line	6 GMC trucks
2 hoisting engines	1 Gersix truck
4 pile drivers	4 Mack trucks
40 double-ender sleds	4 Packard trucks
3 jack hammers	2 Pierce Arrow trucks
6 radio outfits	2 White trucks
8 trailers	2 stone crushers
8 road rollers	7 transits
2 power saws	3 levels
2 car tractors	1 pile driver steam boiler
20 Holt tractors	1 power driven pump
3 Titan tractors	82 slip scrapers
1 Yukon tractor	10 wheel scrapers ⁹
70 wagons	

Progress in Ten Year Plan

By 1923 the Board reported on the progress of the 10 year plan which, in summary, had called for construction of 700 miles of feeder highways, mainly along existing routes, at an estimated cost of \$7,000,000; development roads on location to be determined at an estimated cost of \$1,000,000; and maintenance of existing road and trail system at an estimated cost of \$2,000,000. For the year 1921 some \$425,000 was appropriated rather than the \$1,200,000 requested; and for 1923 an appropriation increased to \$650,000 still fell far short of the \$1,500,000 requested. In summary, the Board had asked for \$3,655,000 and received \$1,540,000 or something over one-third.¹⁰

Such statistics indicated that in the third era of the Board of Road Commissioners for Alaska from 1920 did not differ from earlier times in that appropriations did not meet the hopes of planners. Whether the persistence of shortfall between expectations and realities should be marked with particular attention as an indictment of federal neglect is another matter.

On this overall question it should be noted that Alaskans throughout their history as a territorial possession believed themselves to be victims of their limited political influence in Washington, D.C.¹¹ Residents complained when the government did not provide the services available to other Americans. Complaints were very vociferous during the Gold Rush era when the federal government might perhaps have been excused for a tardy response to such a swift swelling of the population. Alaskans expected full mail service despite the awesome distances and scattered population of the land. They expected trails, roads, railroads, telegraphs, and police protection as well. To a great extent the federal government met the expectations of Alaskans with large expenditures of public monies, particularly after the Gold Rush. Whether the expenditures were reasonable under the circumstances cannot be measured here. Before insisting that the government might have spent more money on Alaska's roads, it might be necessary to find that given the other national priorities at a given time, it was obviously negligent of the government

to provide more funds. Whether such an assessment could actually be made, even after an intensive study, is unlikely. This conclusion is not an exercise in avoiding the question, but rather an expression of the question's complexity. How much money did the other western territories get for their roads when their development was at a comparable stage to Alaska's in 1920? Did Alaska deserve more because of its size, or less because of its small population and limited industry? Would Alaska have developed more rapidly if roads had been planned to foster economic development rather than being built once a district's activity made the need for roads urgent and feasible?

Funding Roads and Trails

Funding for roads and trails was not limited to the annual appropriations made to the Board. About forty percent of the total cost of the road and trail system came from the Alaska Fund, derived from federal trade and occupation taxes collected in Alaska. Furthermore, as already discussed earlier, the territorial Legislature had started to deal with road matters in its first session in 1913, and subsequently addressed the issue in most succeeding biennial sessions, and provided funds as well.

While the territorial government wrestled with Alaska's transportation system, the federal government acted in 1923 to insure some cooperation among the various agencies with programs in the territory. The completion of the Alaska Railroad that year had suggested a potential conflict between the Board and the Alaska Railroad, both in the transportation business. To prevent this, the railroad enabling legislation had provided for the assignment of the president and engineer officer of the Board of Road Commissioners to the two additional posts of chairman and chief engineer on the Alaska Engineering Commission, the body managing the Alaska Railroad.¹²

Road Construction and Railroad Management Merged

On March 26, 1923, Board President Steese became the chairman and Major John C. Gotwals assumed the post of chief engineer of the Alaskan Engineering Commission. This combined the road construction and railroad management. Steese obviously was very pleased with the new arrangement and its streamlining, "hourglass" efficiency, for he stated that

the practical results of the foregoing orders have been the development, without legislation but through executive order or interdepartmental or interbureau agreement of a practical working arrangement through which the facilities of all the services involved are used interchangeably. A careful account is kept so that each appropriation is eventually expended for the purpose intended by Congress and no appropriation is either increased or diminished by such interchange of working funds or facilities. Separate accounts and reports are rendered to the departments under the direction of which the work is performed.

The result has been an immediate speeding up of development work upon a unified plan based upon a careful survey of the situation, a thorough knowledge of the entire Territory and its problems, and a coordination of all the various conflicting interests after full hearings before all parties at issue. Instead of interminable conferences between different bureaus which formerly sometimes required papers to travel to Washington and back several times, matters are handled promptly upon the ground, or whether the approval of Washington is required, such approval has usually been obtained by a single telegram covering the various angles or the views of the bureaus concerned.

The following are the activities involved in this arrangement: the construction, repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works now aggregating over 9,000 miles, and extending from open-all-the-year-round south coast ports to all inhabited parts of the Territory; Territorial roads, bridges, ferries, and trails throughout the Territory, covered by cooperative agreements; shelter cabins; Nizina River Bridge; Nome-Shelton Tramway (87 miles operated by cars drawn by dogs); Tolovana Tramway; Kaltag Portage Survey; Improvement of Nome Harbor; Improvement of Wrangell Narrows, Tolovana River, Yukon-Kuskokwim portage, English Bay, and Gastineau Channel and adjacent waters; the investigation of port facilities; the survey and design for a government dock at Juneau; the issuance of permits for fish traps and other structures in the navigable waters along the Territory's 26,000 mile

coast line; miscellaneous inspections, public hearings, and contingencies of rivers and harbors; improvement of Sitka National Monument; Development of Mount McKinley National Park; construction, maintenance and operation of the Alaska Railroad from Seward to Fairbanks, 470-1/2 miles; railway spurs to the Eska, Jonesville, Chickaloon, and Healy River coal mines, 46 miles; from Fairbanks to the gold creeks as far as Chatanika, 39 miles narrow gauge; Moose Creek coal spur, 4-1/2 miles narrow gauge; also river boat service on the Tanana and Yukon Rivers between Nenana and Holy Cross, 750 miles, with through billing arrangements covering freight service from Seattle or Tacoma to points on the Yukon River and its principal tributaries between the International Boundary at Eagle and Bering Sea at St. Michael; also an agreement covering automobile service on the Richardson Highway from Fairbanks to Chitina and Valdez, 410 miles; also operates coal mines, hospitals, hotels, and commissaries.

The organization chart looks like an hourglass with the central office at the waist. All authorities and appropriations are gathered in from the four departments and six bureaus and then spread out again over the various jobs. Similarly the reports and vouchers are gathered up from the various outlying districts, vised, and then passed up to the various departments and bureaus under whose direction the particular work has been handled.¹³

By May of 1923, the railroad and the Board used each other's men, equipment, and supplies interchangeably. But because only the Congress could transfer the functions of the Board to the Department of the Interior where the railroad was located, the two organizations continued to be treated separately for accounting purposes.¹⁴

Merger Dissolves

Despite Steese's optimism, he was replaced as the railroad Chief after only six months in office, and the consolidated operations of the railroad and the Board functions ceased. The experiment had been unsuccessful because the railroad had too many problems which Steese and Gotwals had been unable to solve in their brief tenure. These included the railroad's rickety condition. Their predecessors had poured their appropriations into construction and reconstruction of the doddering Alaska Northern Railroad which comprised the first 70 odd miles out of Seward of the Alaska Railroad. They had also spent monies on general

economic development and operations. In short, much of the railroad construction had been makeshift and needed replacement, and there was not enough time and money to accomplish this. In the final analysis the railroad and the Board broke apart because Congress did not encourage a permanent merger.¹⁵

Finances

The Board once again operated on its own, and the financial summary of June 29, 1923, gives a full picture of the project funding for the 1919-1923 period:

FINANCIAL SUMMARY

Amount expended on all projects to June 30, 1923,
including receipts from sales, etc:

During fiscal years			
1905-1922	\$6,409,424.04		
Fiscal year 1923	619,869.62	\$7,029,293.66	
Alaska special fund			
fiscal year 1930-1922	277,885.60		
Alaska special fund			
fiscal year 1923	<u>121,212.87</u>	<u>399,098.47</u>	
			<u>7,428,392.13</u>
Total for new work	4,277,696.99		
Total for maintenance	<u>3,149,695.14</u>		
Total expended		7,428,392.13	
Balance available		<u>669,118.41</u>	
Grand total to be accounted for			<u>8,097,510.54</u>

Appropriations to June 30, 1923:

Construction and maintenance of military post roads, bridges and trails, Alaska		4,945,000.00
Wagon roads, bridges and trails		
Alaska fund	2,652,892.56	
Increase of Compensation, War Department		34,265.01
Receipts from sales, etc.	48,694.14	
Refunds to Alaska fund	3,187.18	
Refunds to War Department appropriations		2,120.49
Refunds to contributed funds	20.45	
Reimbursement from Navy Department		3,976.19
Sales, etc., to accrue to Alaska fund		7,276.50
Funds contributed by Territory of Alaska and towns, for public roads, bridges, trails and ferries, Alaska special fund		
	<u>399,078.02</u>	
Total		8,097,510.54

Fiscal year ending June 30

	1919	1920	1921	1922	1923
Expended for improvement and new work	\$114,829.11	\$185,190.66	\$432,243.90	\$236,251.91	\$314,195.39
Expended for maintenance	<u>184,195.15</u>	<u>173,410.59</u>	<u>234,545.28</u>	<u>446,995.77</u>	<u>425,887.10</u>
Total Expended	<u>299,024.26</u>	<u>358,601.25</u>	<u>666,789.08</u>	<u>683,247.68</u>	<u>740,082.49</u>
Appropriated by War Department Acts	100,000.00	100,000.00	350,000.00	425,000.00	1,115,000.00
Allotted from Alaska fund	52,372.31	124,991.96	218,237.10	173,029.19	3,398.23
Contributed by Territory of Alaska and Others		115,517.94	113,746.61	56,421.05	113,412.87
Increase of Compensation, War Department			940.00	4,322.09	28,857.72
Total	<u>152,372.31</u>	<u>340,510.90</u>	<u>682,923.71</u>	<u>658,772.33</u>	<u>1,291,668.82</u>

Increase of compensation, Military Establishment - Continued.

1921	\$940.00	
1922.....	4,322.09	
1923.....	<u>28,857.72</u>	
Total.....		<u>34,265.01</u>

Grand total, Federal funds..... 7,632,157.57

CONTRIBUTED FUNDS

(Act of Congress approved June 30, 1921, Alaska special fund)

1. By the Territory of Alaska:

Act of legislature approved Apr. 21, 1919 - Public roads, bridges, trails, and ferries - Fiscal year 1920.....	\$115,517.94	
1921.....	<u>85,746.61</u>	\$201,264.55

Approved May 7, 1921, roads, etc. - Fiscal year 1921.....	28,000.00	
1922.....	43,237.28	
1923 (includes \$20.45 refund).....	<u>88,533.33</u>	159,770.61

Approved May 5, 1921, Nizina River Bridge - Fiscal year 1922.....	5,000.00	
1923.....	<u>20,000.00</u>	25,000.00

Approved May 7, 1921, Shelter Cabins - Fiscal year 1922.....	6,500.00	
1923.....	<u>3,500.00</u>	<u>20,000.00</u>

Total territory..... 396,035.16

2. by others:

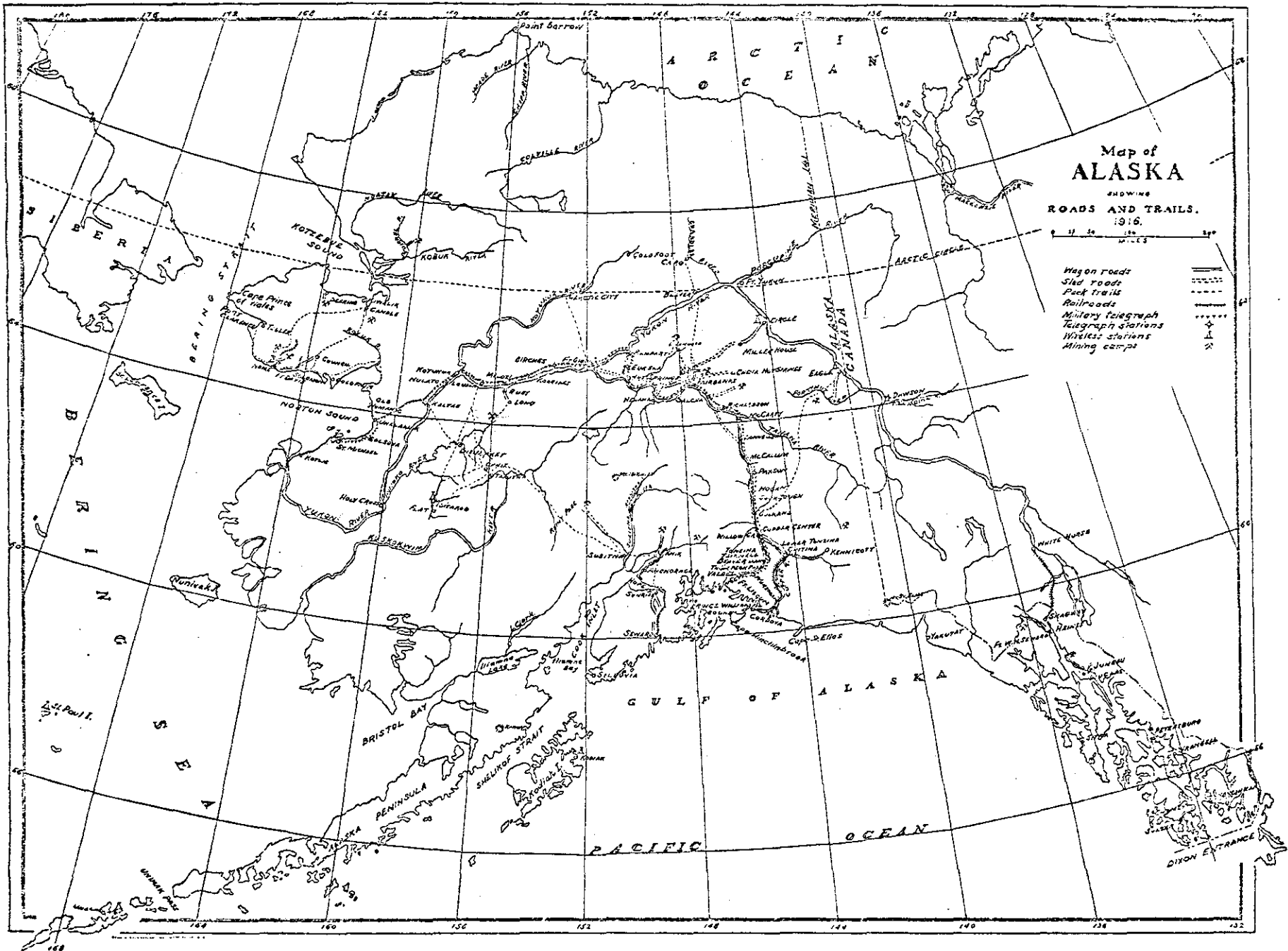
Fiscal year 1922 - City of Valdez.....	220.02	
City of Wrangell.....	500.00	
City of Sitka.....	500.00	
Alpine Club of Skagway.....	<u>463.75</u>	<u>1,683.77</u>

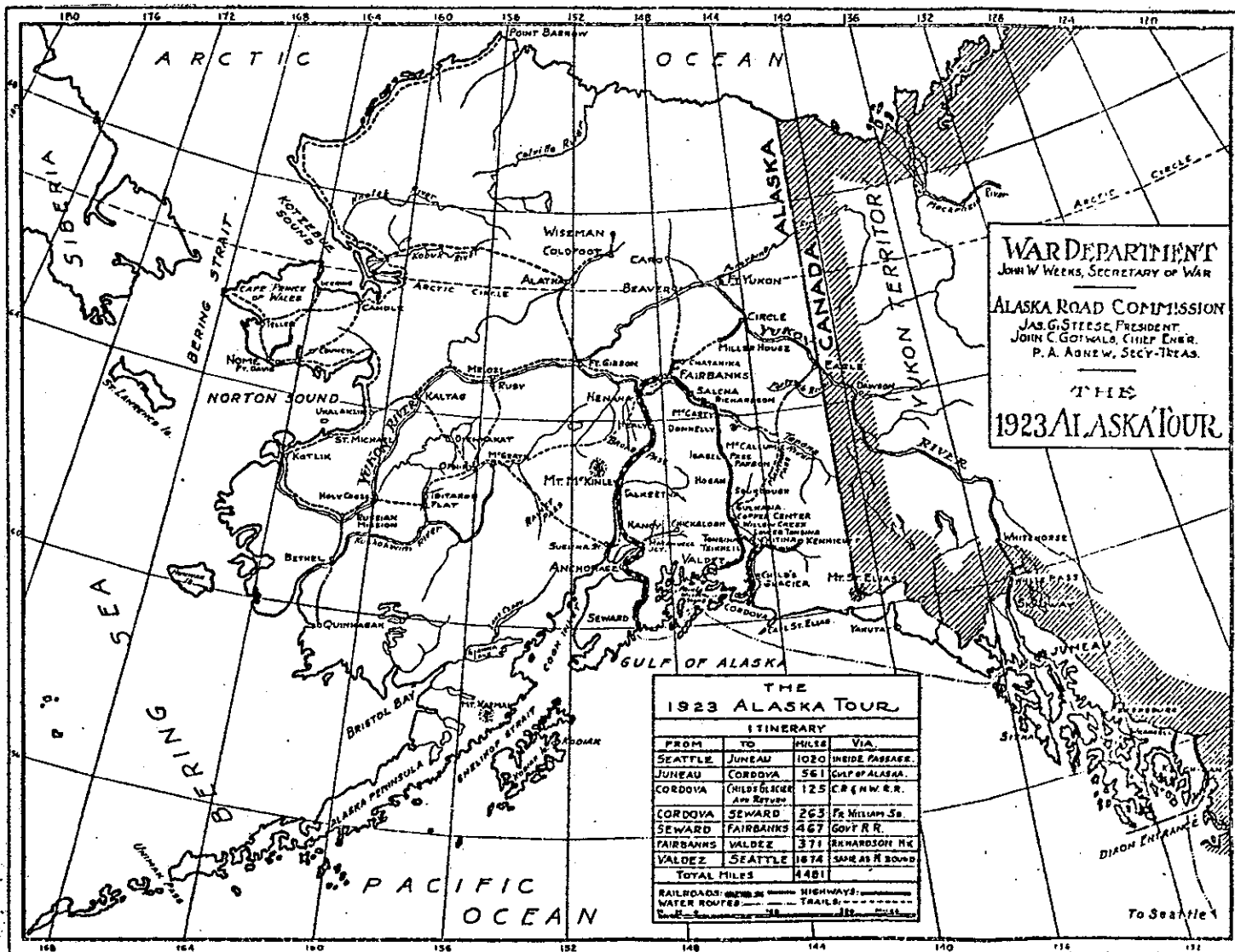
Fiscal year 1923: City of Valdez.....	601.83	
City of Juneau.....	<u>777.71</u>	<u>1,379.54</u>

Grand total, contributed funds..... 399,098.47¹⁶

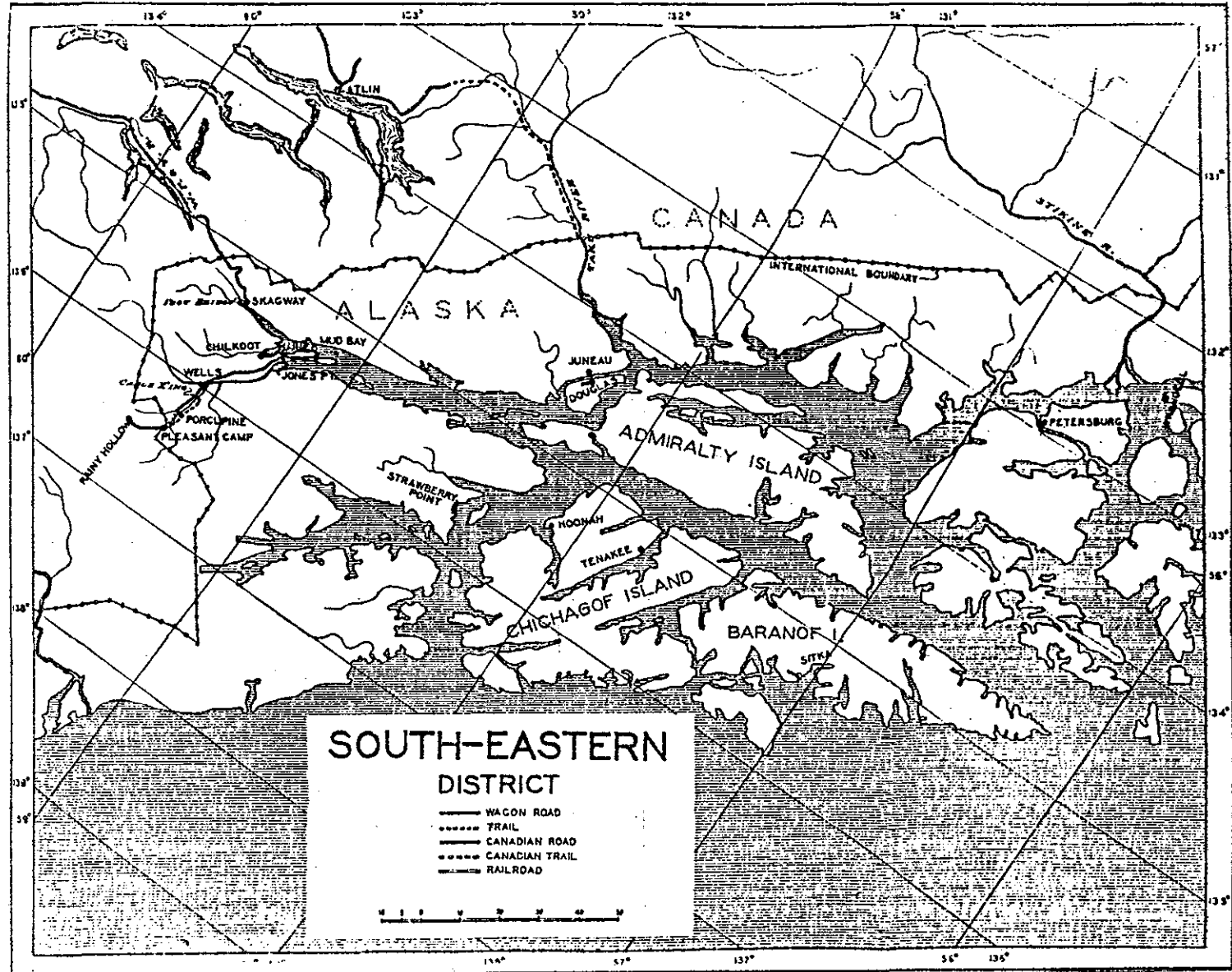
In 1923 the Board also published a large wall map which showed every trail and road in Alaska. This fine document remains the most valuable source of locating particular routes, although smaller-scale components.

of the overall map were published in the 1921 annual report and in other annual reports of the 1920's. For ready references the maps are included here.¹⁷

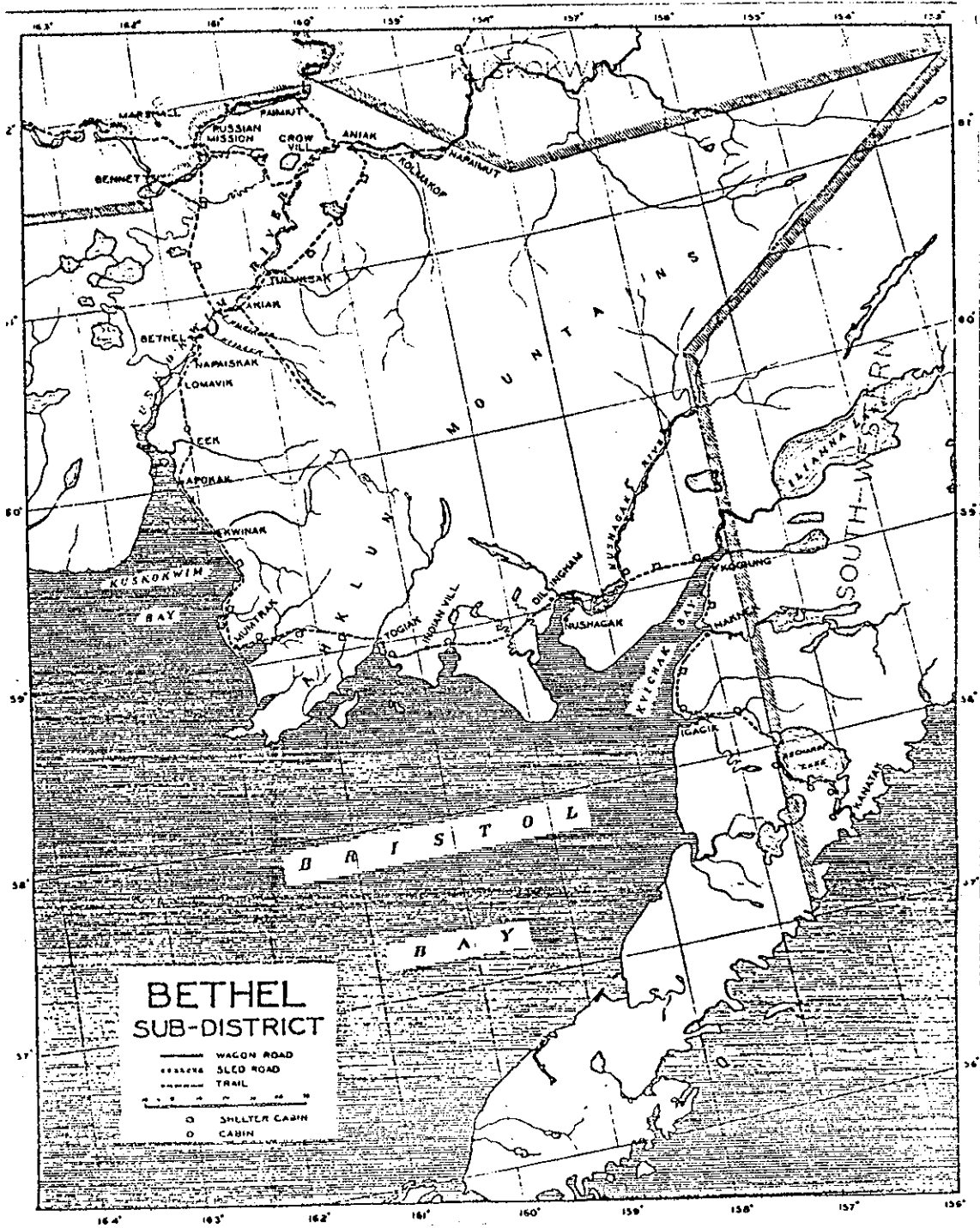




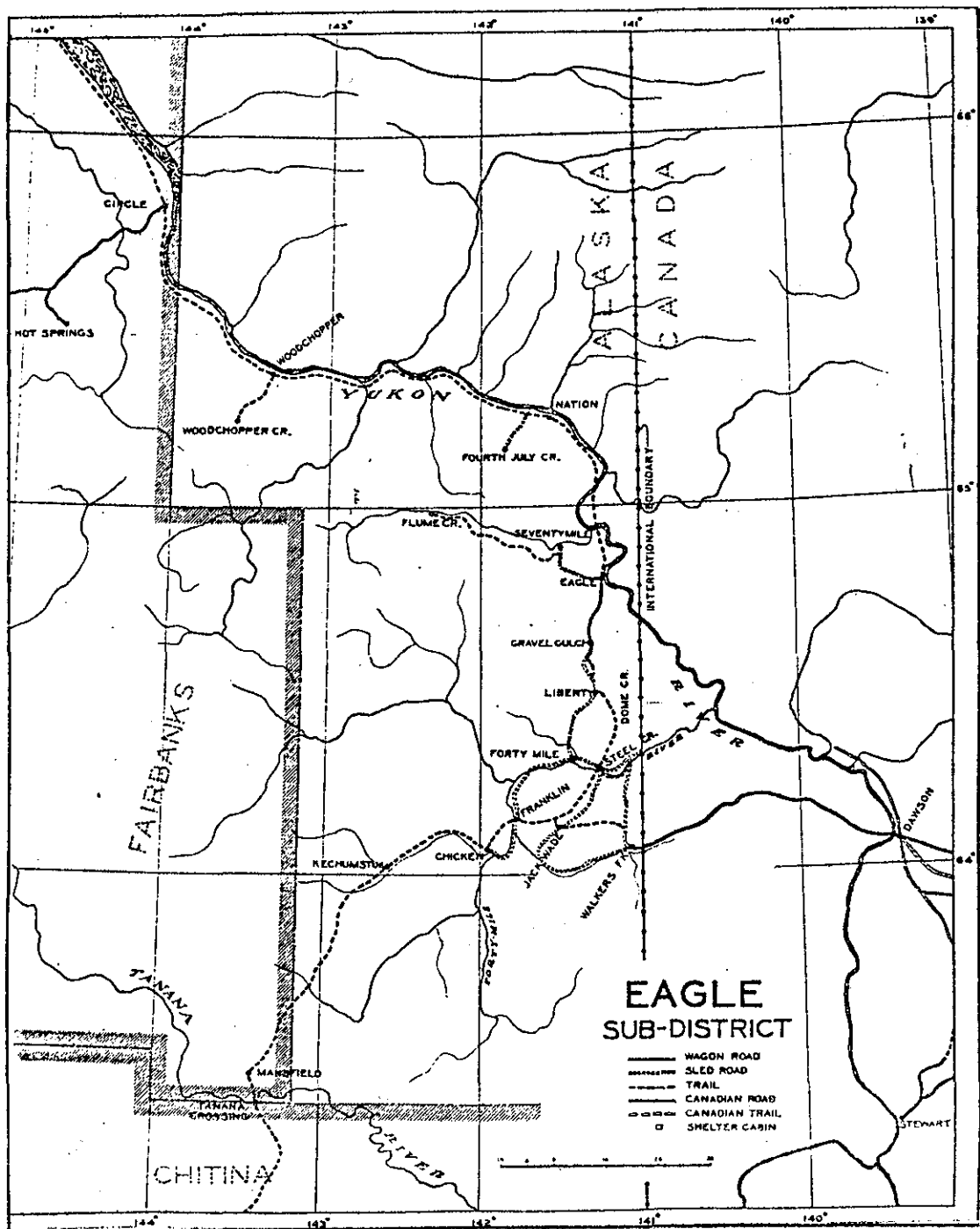
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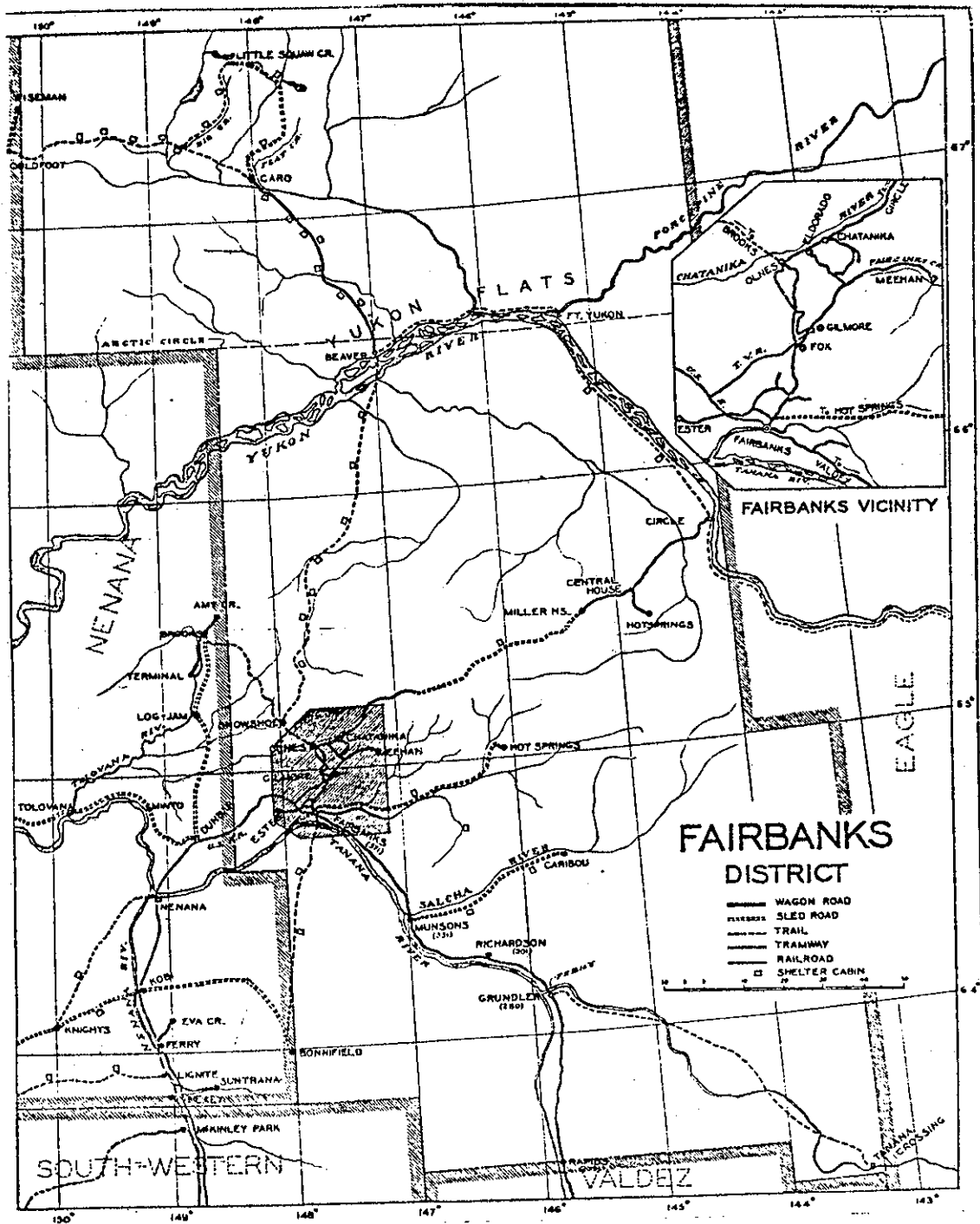
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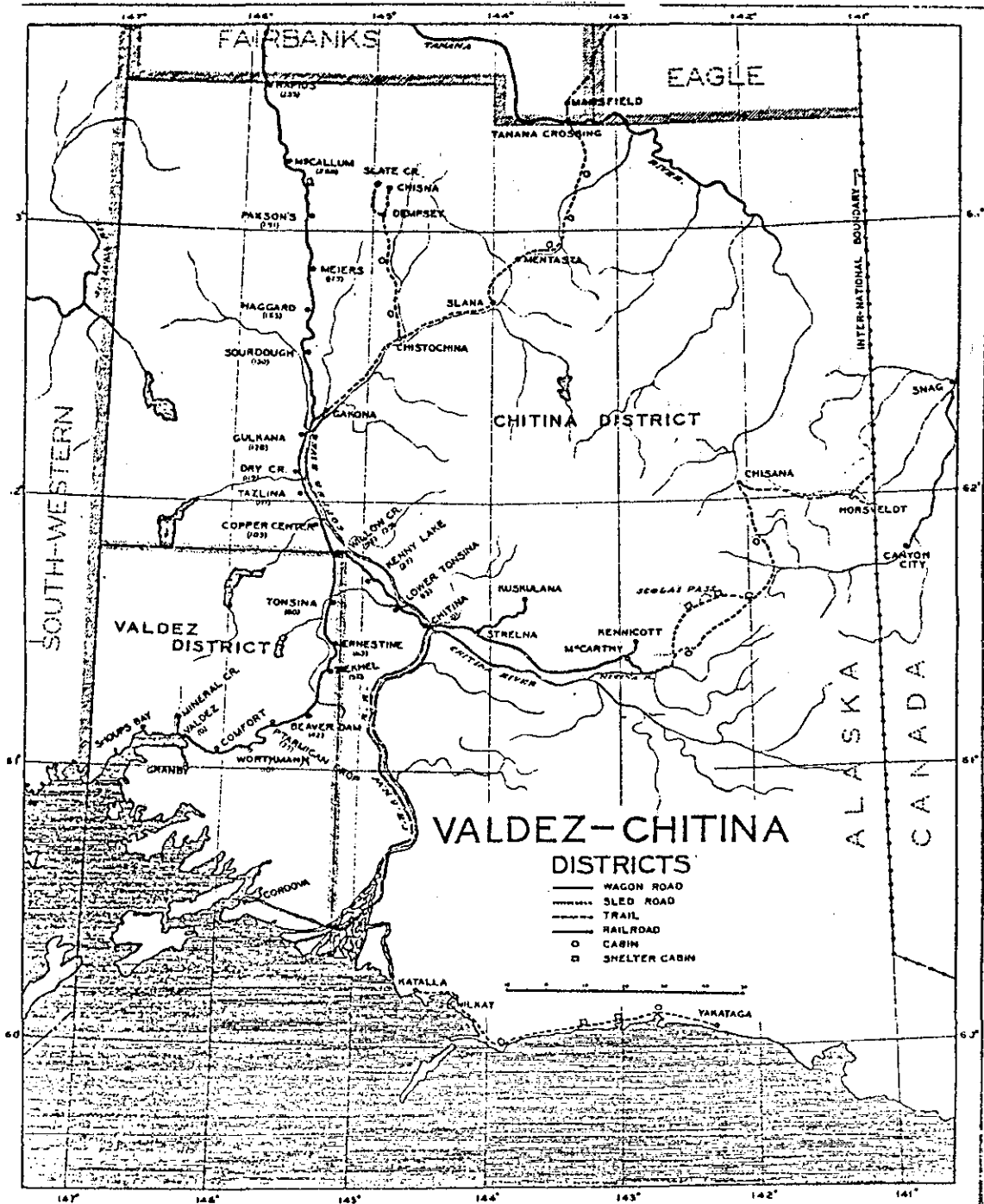
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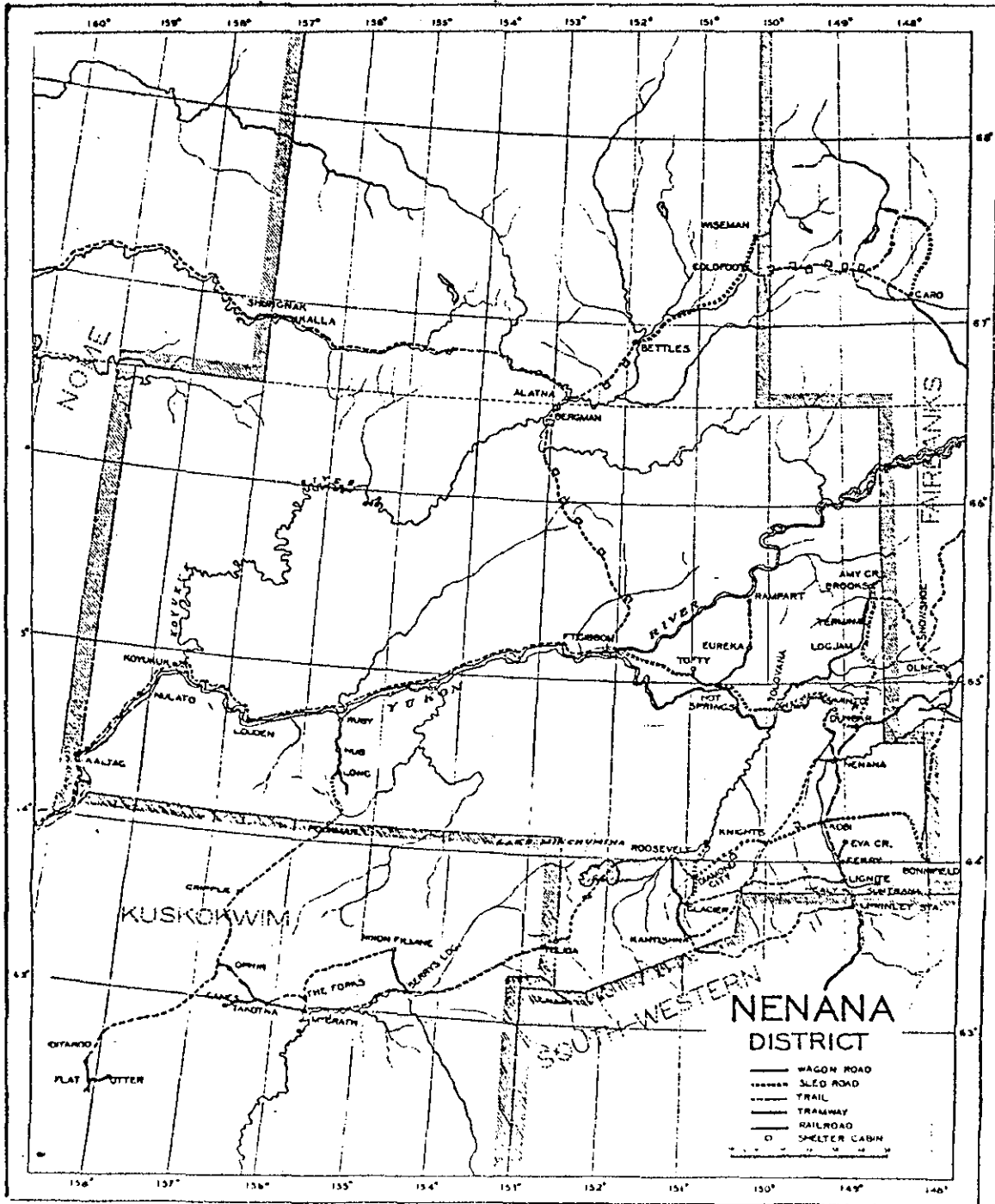
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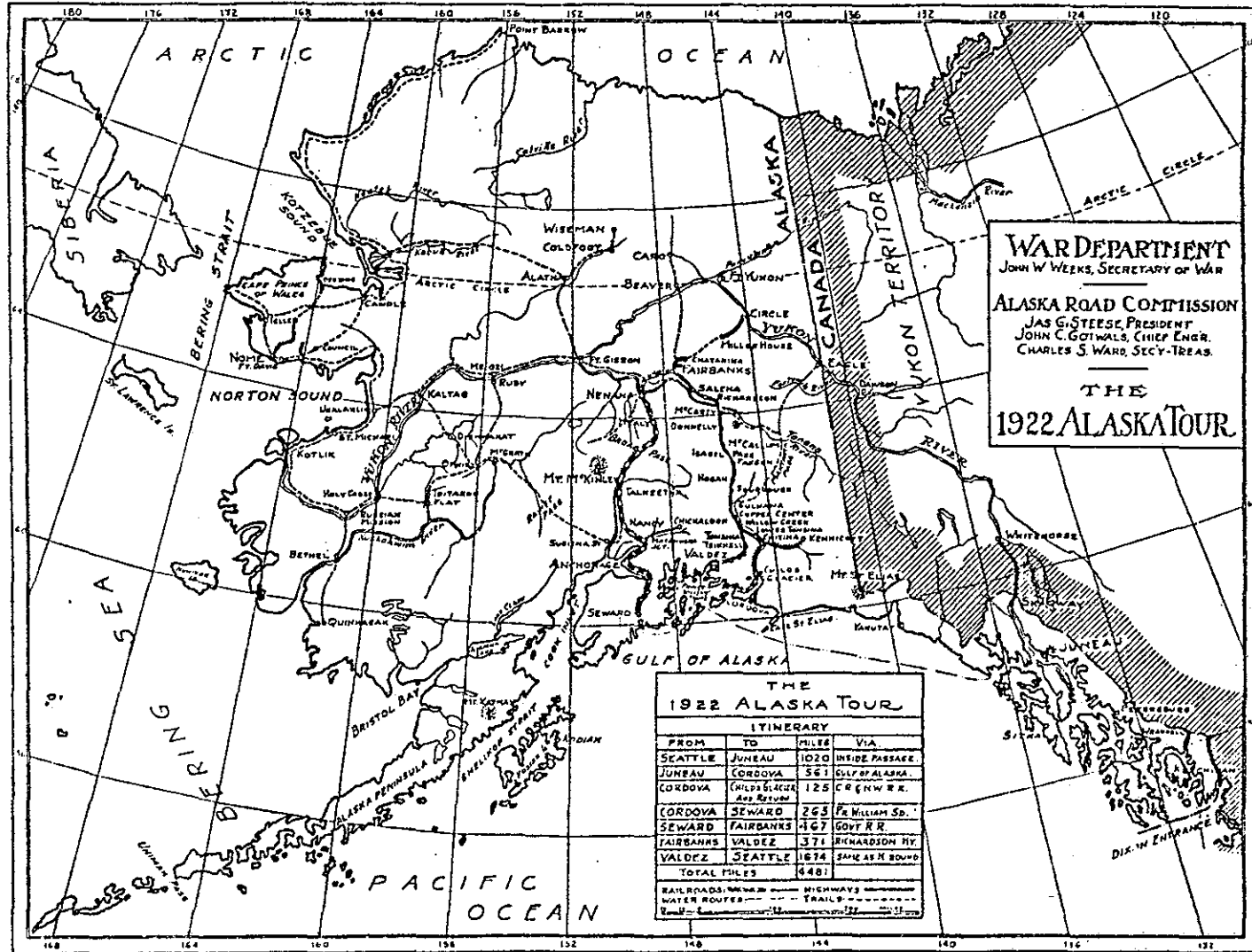
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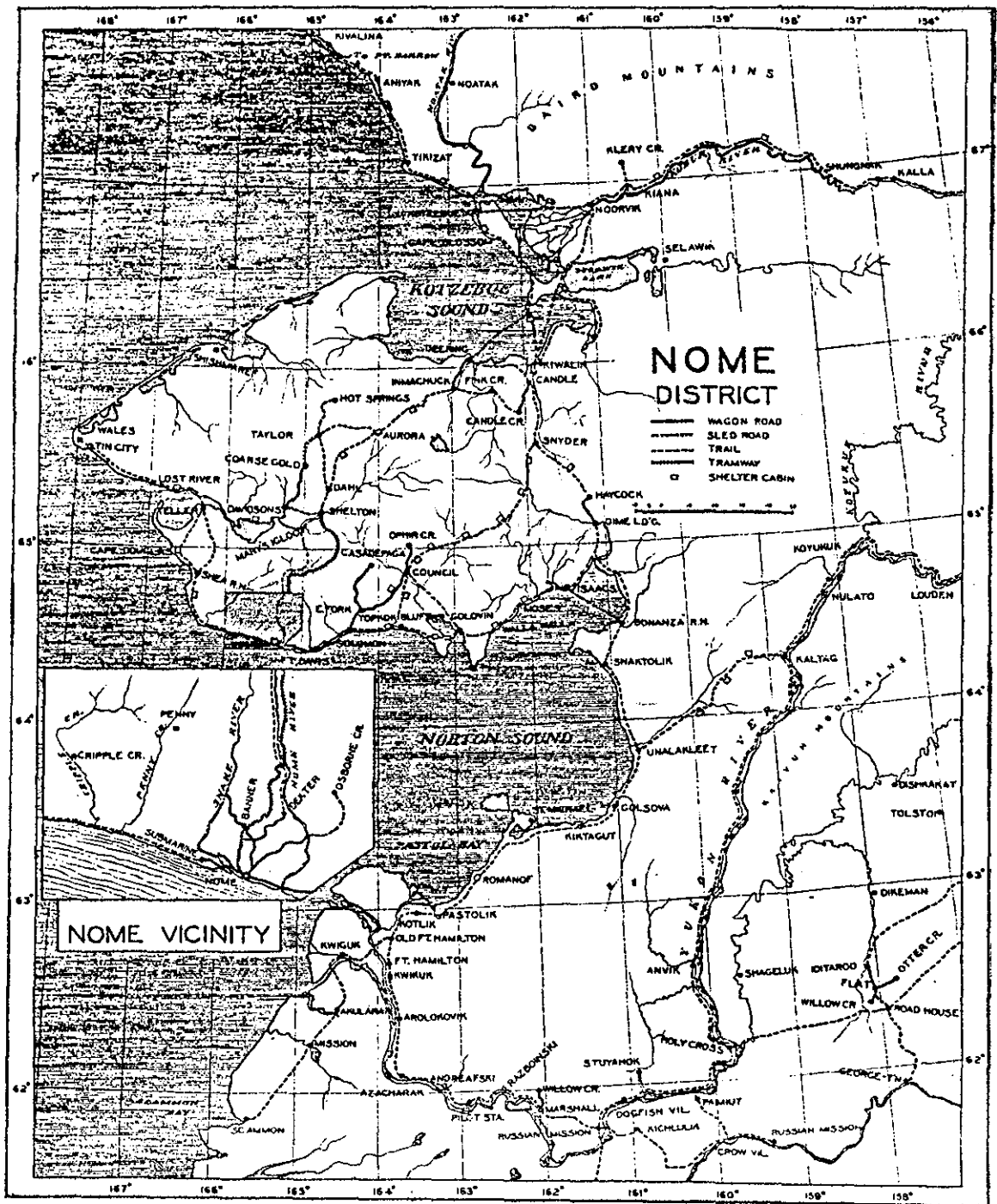


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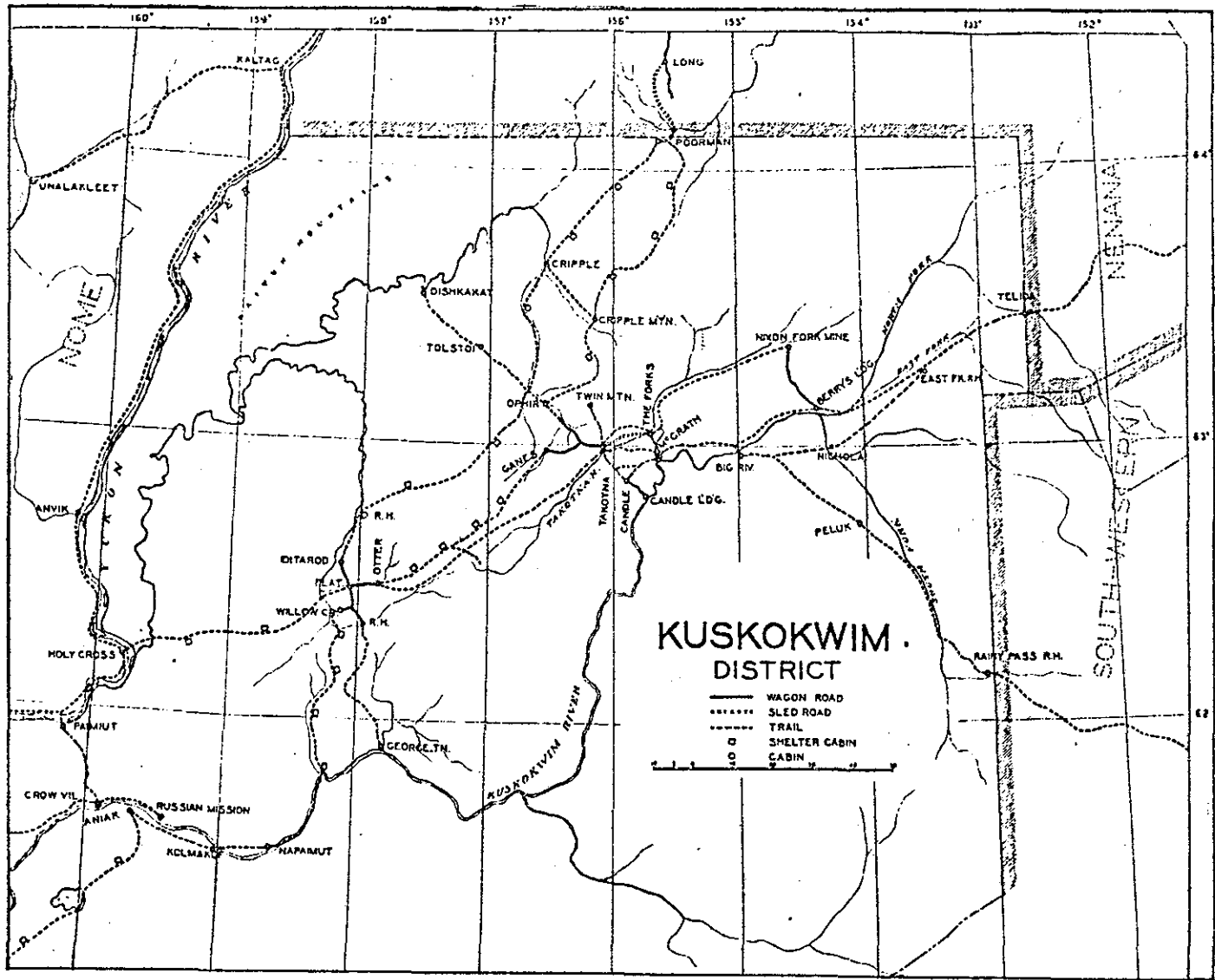


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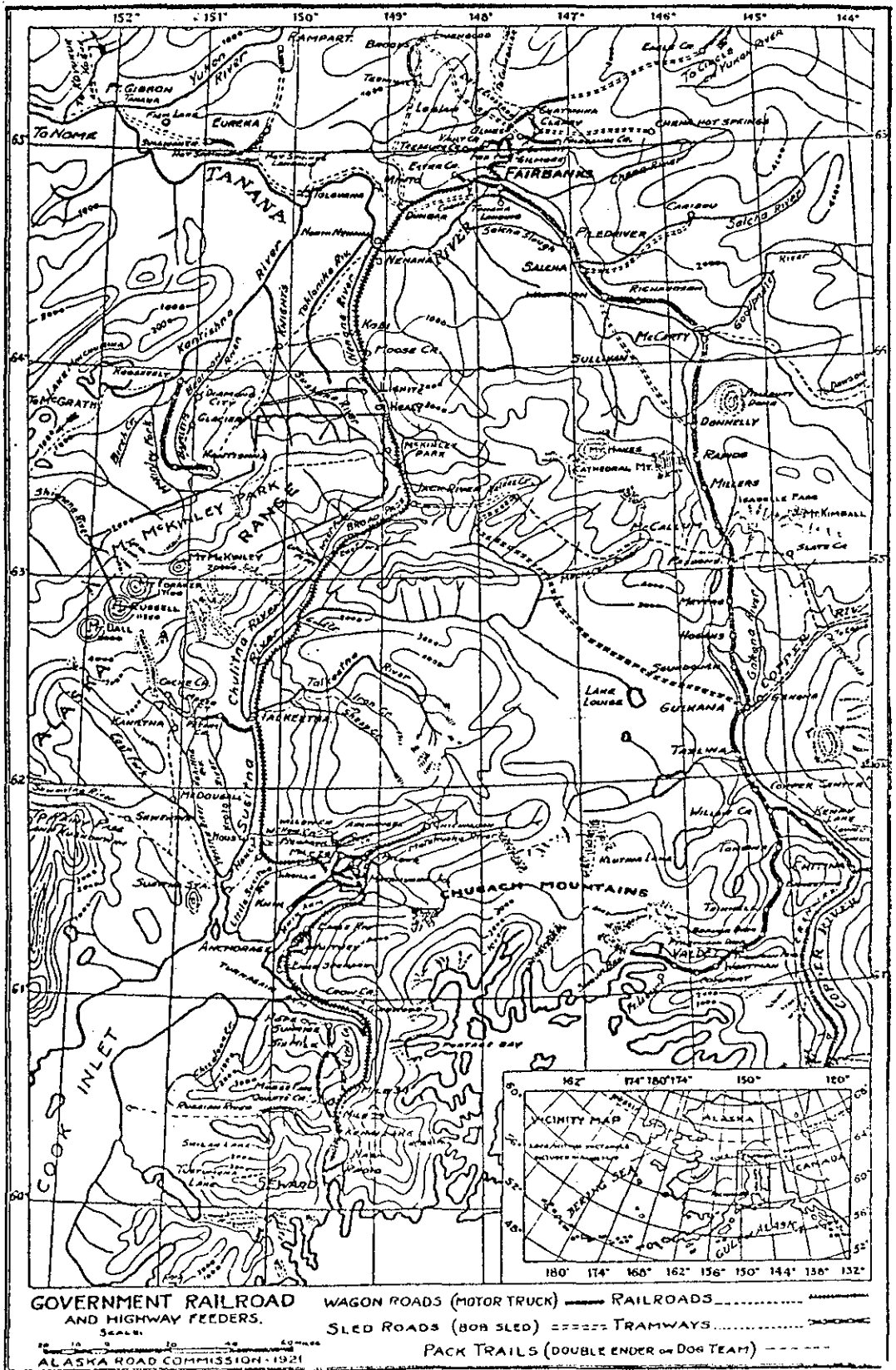
ENGINEER REPRODUCTION PLANS, U. S. ARMY, WASHINGTON BARRACKS, D. C. 4633 1



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Progress Reports

The crews of the Board of Commissioners worked hard, and the monthly reports by the various district engineers give the real flavor of the work. C. G. Morrison, responsible for the Valdez-Fairbanks road, tells of the achievements and difficulties encountered by his crews in July and August, 1918. His reports follow in full:¹⁸

July 1918

1. CHITINA - WILLOW CREEK ROAD.

Foreman W. R. Cameron with a crew of 13 men, four horses, and three automobile trucks in addition to the regular maintenance of this entire section has been engaged in the surfacing of one and three fourths miles between mile 11 and 12.75. In doing this 1178 cubic yards of gravel and 100 cubic yards of rock have been moved by the trucks.

An excellent quality of gravel has been secured in mile 12 and approximately 3000 cubic yards uncovered during the month. A double loading bin has been constructed at this point the filling of the bin being accomplished by slip scraper.

The stripping of this gravel deposit has been expensive as both the gravel and surface soil were frozen. In the future, I believe that it will be advisable for use to strip the surface from the gravel pits at least two months previous to the time when they will be needed.

Between mile 11 and mile 13 all ditches have been cleaned or enlarged, a few culverts repaired, and all sharp corners on the inside of sharp curves have been removed.

The entire length of this section has been maintained in excellent condition during the month.

2. VALDEZ - ERNESTINE ROAD.

(a) From mile 1 to 3 inclusive foreman T. O. Bell with a crew of two men has been employed throughout the month on the placing of fascines, repairing grade, removing drift from the bridges, and making light repairs to the bridges in this section.

On the 16th, a bridge of three spans was washed out and on the 20th, another of one span was lost, both being in mile two. A pile-driver was secured from the Valdez Dock Co. and after considerable trouble and delay sufficient men to operate it were secured only on applying to the Commanding office at Fort Liscum. By the 28th, both these structures were again in place each having had two spans added to their original length.

(b) During the entire month foreman Matt McGlade with an average crew of 12 men and 4 horses has been employed between miles three and thirteen fighting the inroads from the Lowe River. A total of 650 cubic yards of gravel and rock and man loads of brush were employed in this work in addition to numerous logs which were used for crib diversion spurs in the river. Several stretches of grade in miles 8, 10, and 11 had to be raised to prevent the loss of the road.

(c) The month of July has been for foreman Naud and his crew a period of unremitting strife with the Lowe River. The destruction caused by the high water has several times nearly discouraged the men in the crew. The men are to be commended for having remained with the work in the face of such a discouragement.

The shortage of labor on this section has been felt to a considerable extent. Sections of the road in miles 12 and 13 have been destroyed several times thus shutting off the traffic for short periods. At the end of the month a piece of the old railroad grade in mile 13 at the mouth of the Keystone Canyon was taken out. It has been necessary in each of these cases to place the new road in the solid rock to prevent any further damage.

Bear Creek at the head end of the Canyon has been giving trouble for some time as the old river bed has filled in up to the level of the bridge floor. The course of the stream has been changed until now it is running to the north of the double truss. The few views which were sent you some time ago will show this action.

Nauds crew consisted during this period of an average of 11 men and four horses.

(d) From the summit of Thompson Pass to Ernestine foreman Howard with 6 horses and with a crew of 17 men in addition to the regular maintenance has done the following work:

Constructed or repaired 23 culverts

Placed 240 cubic yards of gravel surfacing or 6600 linear feet

Placed rock fill in washout near summit, 500 cubic yards

Ditched 2730 linear feet

Blasted out of rock on steep grades about 600 cubic feet to prevent further washouts.

On the 28th, due to the washout and inroads from the Saina River at Beaver Dam a dike was constructed and clearing and grading started in mile 43 for a diversion around the washout. As the present road in miles 42 and 43 is below the elevation of the river bed of the Saina at this point the new location was laid out with the idea of placing both mile 42 as well as 43 on the hillside within the next two years it being very certain that the river would in that time at least destroy the present road. The south approach to this diversion was for this reason made steeper than would otherwise have been the case as it is the intention to abandon about three hundred feet of it when it becomes necessary to lengthen out the diversion. When this work does become necessary there should not be the question of labor that we had to meet this season.

3. Foreman Joe Olson, with an average crew of 20 men and 8 horses, in addition to maintenance over the entire section from Ernestine to Copper Center, has constructed numerous bridges and culverts in addition to removing mud and rock slides. In most cases the bridges and culverts were necessitated by the loss of the former ones by fires. There appears no evidence as to the origin of the fires, although I am certain that the mushers are in nearly all cases the guilty parties. Of course, in some cases in the past our own men in the road crews have been responsible.

This bridge work is as follows:

1	bridge of 44	feet	span		
1	"	"	61	"	"
1	"	"	21	"	"
1	culvert	"	10	"	"
2	"	"	8	"	"
5	"	"	6	"	"
1	"	"	5	"	" and
3	"	"	5	"	" rebuilt and
9	"	"	5	"	" repaired

In addition to the above, during the month 590 cubic yards of gravel were placed as surfacing on roads.

4. Copper Center - Sourdough

Foreman Shipp with a crew of 19 men and 8 horses in addition to the regular maintenance constructed three and one half miles of new grade between mile 124.5 and 128, built 17 new culverts in this section, and putting 1000 linear feet of drainage ditches, the culverts in this section being of an average span of six feet.

5. Sourdough - Paxson

With a crew of 17 men and 8 horses foreman Ellingson with the exception of grading one mile south of Paxson has been engaged in cleaning and enlarging ditches, repairing culverts and bridges, and in the repair and dragging of the grade.

6. Paxson - Rapids

Holland's crew of 20 men and 8 horses at the first of the month were employed in bridge construction and in the removal of the heavy snow drifts in the vicinity of Millers Road House. On the completion of the bridge in mile 227 which was reported last month a dike of rock, gravel, brush, and wire netting was constructed just above it to concentrate all the glacier water at the bridge. This dike had an extreme length of 467 feet. Another dike of the same type was constructed in mile 223 to control the river at the Long Bridge. The later dike has a length of 210 feet. A new road 610 feet in length was constructed in mile 217 to replace a washed out section. Over this entire section the scour from the glacier streams the Phelan and Big Delta River annually does considerably damage. During the past month it has been necessary for Holland to protect 1750 feet with brush and whole trees used as fascines. The section of the road between Yosts and the Summit although dragged has absorbed

so much water that it has been impossible to prevent it being cut up. It, like numerous sections at other places in the Valdez - Fairbanks roads needs a surface of gravel or at least of sand before satisfactory results will be obtained.

7. Rapids - McCarty

Foreman Oscar Olson with his crew of 20 men and 8 horses has during the entire month been employed on the section between miles 275 and 243. The former trail between McCarty and Beales Cache has been repaired and drained so that although not graded it is now one of the better parts of the road. This distance of 18 miles is now being made in 50 minutes by the stage cars.

The road over the Dome and in the vicinity of Donnelly has all been placed in good condition and the culverts of the entire section are now in good shape.

At the end of the month the camp had been moved north of the telegraph station at Donnelly and a start made on the grading of the road from mile 240 to 232 at Rapids. This work is to be of standard section and the alignment will be as straight as possible.

8. McCarty - Richardson

During this month no maintenance has been necessary on this section.

9. Richardson - Munson

Foreman Sheedy has repaired culverts and bridges between miles 320 and 312 and ditched, cleared, and repaired the grade between miles 317 and 312. During the month six contract horses with their owners have been employed on slip scrapers and a four horse team has been used for freighting for this camp as well as to place supplies in the several caches.

10. Munson - Fairbanks

Foreman McKinnon on July 7th started out of Fairbanks with the new Case tractors which during the month have been used for regrading and dragging of the road. The summary of the work accomplished is as follows: Repaired culvert at 368 mile post, placed new floor stringers in the Little Piledriver Bridge, repaired the Little Salchaket Bridge as well as placed new floor stringers, and also repaired two culverts near the 336 mile post. The entire length of the road was dragged with the new Three Way Drags. From mile 364 to mile 356 gravel and sand were placed in all mud-holes and the bad spots were all repaired. Three hundred feet of bad road at mile 355 were covered with gravel. Near this same place 200 linear feet of road were raised and covered with gravel. In mile 353, 1500 linear feet of road were raised one foot and covered with gravel. The road near mile 348 was also repaired for a distance of 400 feet.

This crew consisted of a total of eight men having two Case tractors, one large grader, and two Three Way Drags for the entire month and for a portion of the month a two horse contract team with

driver which was used for the bridge repairs and in the transporting of the gravel and sand from the the distant pits to the mudholes.

11. Eagle - Forty Mile

The crew under J. B. Powers started on general maintenance on July 10th. Mr. Powers reports that the season is a very dry one and that he therefore expects to accomplish considerable without any lost time or funds. He has requested an additional allotment principally, I believe, to furnish work to the miners of that district who are unable to work their claims on account of shortage of water. Nothing other than maintenance has been accomplished.

12. Circle - Miller House

Mr. John Joslin, the foreman in charge, had completed all the work on this project by August 4th and on that date was en route down the river to his new assignment at Arctic Circle Hot Springs. The following was the work accomplished on this project:

- a. Seven miles of road regraded
- b. One thirty foot bridge constructed
- c. All bridges and culverts repaired
- d. Ferry scow at Birch Creek repaired
- e. Passenger car and carrier erected across Birch Creek.

13. Ruby - Long

During the period from July 1st. to 7th. awaiting advices as to the appropriation for the new Fiscal Year nothing was done. From the latter date to the end of the month the crew was again in the field. There are now 9 men and one team in the crew. The first camp was pitched at mile 27 where a 60 foot bridge and 2000 feet of connecting road was being built at the last report. The maintenance of the entire length is being continued and it is the intention to finish the grading into Long, a distance of approximately two and one half miles.

14. Hot Springs Landing-Eureka and Hot Springs-Sullivan Creek.

Mr. John Joslin arrived here on the project on August 20th. and immediately started work on the Hot Springs Landing Bridge which had been destroyed by the break-up this spring.

15. Rampart-Eureka

Wm. Garrett was appointed by Mr. Joslin as road patrolman and continues to render his personal services at all times having the privilege during times of necessity to engage other labor to assist him.

August, 1918

1. VALDEZ - ERNESTINE ROAD.

Foreman Bell with an average of two men during the entire month

has been employed between Valdez and mile four repairing bridge floors, clearing drift from bridges, placing fascines for grade protection and maintaining the gravel surfacing over the entire distance. There have been no washouts on this section during the month.

Foreman McGlade with two teams and an average of nine men has during the entire month been engaged solely on repairing damages in miles seven to eleven inclusive which had been caused by inroads from the Lowe River. He also constructed 335 linear feet of gravel and earth filled log diversion spurs to prevent further encroachments from the river.

Foreman Naud with a crew of eight men and two teams was engaged for the entire period on maintenance from mile twelve to eighteen inclusive. He has, during the month accomplished the following:

1256	linear feet of gravel surfacing on the new diversion in mile twelve,
156	linear feet of new road in mile 13 necessitated by scour
300	" " " " " " " " " 12 " " " "
150	" " " " " " " " " 14 " " " "
50	" " " " " " " " " 15 " " " "
100	" " " " " " " " " 16 " " " "
1800	" " " clearing in mile 17 for diversion

Both McGlade and Naud have been on the jump every day of the month in the endeavor to keep the road open at all times and for the most part of the month have been successful. The washout in mile sixteen occurred at the latter end of the month but it was possible to get the mail through as well as the new Nash Quads of the winter mail-contractor before the road was closed.

On the twentieth of the month Bear Creek bridge in mile eighteen was destroyed by the flood water from a glacial lake at the source of Bear Creek. The bridge timbers were all salvaged by the road crew.

Foreman Howard constructed 3400 linear feet of new grading at Beaver Dam in mile 43, the change being necessitated by a change in the channel of the Saina River. The new line is so located that as the river makes further inroads the road may be extended further to the southward. In addition to the grading of this new diversion he has placed 140 cubic yards for gravel surfacing, constructed three new culverts, and rebuilt ten culverts. The crew during this period has on an average consisted of 17 men of whom 7 were native indians. Three teams were used.

2. Ernestine - Willow Creek Road (4C)

The road crew with Joe Olson in charge was engaged during this month on the section from mile 74 to mile 83 inclusive due to the necessity of replacing and repairing bridges and culverts which had been destroyed by a large forest fire during the latter part of July.

The work done is as follows:

one mile of new grading
6 bridges constructed having total width or span of 236 feet,
11 culverts " " " " " " " " 65 feet
1 " rebuilt " " " " " " " " 6 feet
330 linear feet of drainage ditch,
200 cubic yards of gravel surfacing,
2 large mud slides removed.

The total average strength of the crew was 17 men of whom 5 were Siwash Indians.

3. Chitina - Willow Creek Road (6 B and 6 A)

Foreman Cameron having an average crew of twelve men of whom four were native indians up to the 20th of the month were employed in the graveling of the road by the use of three Mack self-dumping trucks and in general bridge and culvert repairs. By the end of the month all bridges and culverts between Chitina and Willow Creek had been rebuilt or strengthened in preparation for the heavy truck and tractor freighting which is to be done this fall and winter by the new mail contractor and the Alaska Road Commission. About the 20th. camp was moved from the vicinity of the gravel pit at 12 mile and was pitched at 14 mile where the remainder of the month was consumed in clearing 2600 linear feet for a diversion along the foot of the hill to escape further floods and washouts from the Tonsina River. As there is considerable frost in all this ground it was thought advisable to do the clearing now so that it would be possible to do the grading next season.

While awaiting the thawing out of the gravel pit the trucks were engaged in moving freight from Chitina out onto the road to the north of Tonsina.

4. The WHITE TRUCK as in former months has been used for freighting supplies of all kinds from Chitina to Ptarmigan Drop and Paxsons. Al Moore, the Commission blacksmith at Chitina, has been placed on the truck as driver and at the same time continues his duties as blacksmith and horseshoer for all the camps from Chitina and Ptarmigan Drop north to Paxson. Our personnel is thus reduced by one man.

5. Motor mechanic A. G. Brown with headquarters at Chitina has continued a close personal supervision and maintenance of all motor equipment as well as doing all receiving and shipping of supplies at Chitina. He spent several days at the Fairbanks end during this month repairing the Ford truck and in general inspection of the new tractors and all the heavy equipment and vehicles between Fairbanks and Valdez.

Mr. Brown is within the draft age and is registered at Riverside, California. As his services are very necessary it is hoped that in case he is drafted you may be able to have him assigned to duty with the Commission. Mechanics are now practically unknown in this

vicinity and it is a certainty that it will be necessary at the beginning of next season to make chauffeurs out of the laborers we may have. Without a good mechanic to watch the drivers and machines the equipment is apt to be laid up for repairs for a considerable part of the season.

At the end of the month the new Case tractor arrived in Chitina and was immediately set up but on account of lack of fuel was not started out onto the road until the first week in September.

6. Willow Creek - Gulkana Road (4 D)

Frank Shipp has been in charge of the crew on this section having a total of 19 men and four teams employed on the work. The work accomplished was as follows:

- 1.75 miles of new grading
- 0.5 miles of clearing and grubbing
- 15 new culverts constructed
- 7 culverts rebuilt or repaired
- 1 pier of the Gulkana bridge repaired and filled with rock
- 21 loads of gravel surfacing placed at the Gulkana bridge
- 940 linear feet of drainage ditches dug

7. Gulkana - Sourdough Road (4 E)

No work done.

8. Sourdough - 165 mile post (4 F)

Ellingson with four teams and 18 men of whom 6 were indians was engaged only during the latter week of the month on this section repairing culverts and filling mudholes in the vicinity of Hogan Hill. During heavy rains and even for some time afterward the road between mile 152 and mile 162 becomes so badly cut up by the wagons and automobiles that an automobile is able to make the distance only after considerable trouble and labor. I am planning to gravel this entire section at the very beginning of the next working season.

9. 165 mile post - 208 mile post (4 G)

Ellingson with his full crew during the first 23 days of the month was engaged between Paxson and Meiers doing the following:

- 122 linear feet of culverts constructed
- 4 miles of new road graded
- 46 cubic yards of gravel placed
- 10 miles of road repaired

10. 208 mile - McCarty Road (4 H)

Lars Holland with the same crew as last month has accomplished the following between Paxson and Rapids:

- 1 bridge 24 feet span at Fish Creek,

2 new culverts of 10 feet span each
1500 linear feet of new road necessitated by inroads of the
Delta River and Phelan Creek,
850 linear feet of road surfaced with gravel, and
repairs made to the Long bridge in mile 222 and the dike at Gun
Creek.

Oscar Olson has had the same crew as in July and during the
entire period has been engaged on road construction. Grading has
been completed between mile post 242 and mile post 237. From 241 to
237 it was necessary to do a considerable amount of clearing and
grubbing.

11. McCarty - Richardson Road (4 I)

Two round trips of a tractor hauling one of the Three Way Drag
placed this section in good shape. A small amount of machine grading
was done in the vicinity of Richardson.

12. Richardson - Salchaket Road (4 J)

Foreman Sheedy and foreman McKinnon were both at work on this
section for a part of the month, the first with a crew of men and
horses for the heavier grading and bridge work while the latter used
the two new tractors with the grader and Three Way Drags to do the
light grading and the general repairs to the entire section.

On the 23rd. McKinnon was placed in charge of all the work with
instructions as follows:

- a. Tractor 30 with chauffeur and assistant to work with Three
Way Drag between Richardson and Fairbanks. At termination
of the season this machine will be stored at Fairbanks.
- b. Tractor 31 with chauffeur and assistant to work with Three
Way Drag between Richardson and McCarty. At termination of
the season this machine will be stored at Richardson in the
cache rented from McClusky.
- c. The crew at present with the tractors and also the crew
under Sheedy will be immediately returned to Fairbanks
retaining only six men and one team under McKinnon to repair
bridges and culverts and bridges and to get out material
for the Little Piledriver bridge.

During the month the entire section of road between the Salchaket
River at Munsons and Birch Lake was put in good condition so that at
no time in the future is it expected that there will be any interrup-
tion to traffic. In addition to the road work the Banner Creek
bridge at Richardson was repaired and the mudsill replaced by
trestle bents, the small grider bridge north of this was repaired,
four other bridges were repaired, two culverts rebuilt, and all the
drainage leading to and from the structures were opened up.

13. Salchaket - Fairbanks Road (4 K)

The section from mile 332 to 330 was regraded and timber gotten out for the little Piledriver bridge. The intention is to do the actual bridge work at the Little Piledriver later in the fall when the slough is dry.

District Engineer Morrison

A year later, in 1919, district Engineer Morrison left Valdez in early May and traveled to Meiers Roadhouse on the Valdez-Fairbanks road. With the season's work about to begin in earnest, he worried that his best mechanic, Arthur, had left the employ of the Board to attend to his sick wife in Seattle. "His absence," he complained, "leaves us in considerable of a fix as there is not a man on the whole job who could fill his place." Morrison thought that mechanics should get at least \$185 per month since chauffeurs received \$165 per month. Without the pay boost it would be difficult to engage competent men.¹⁹

Morrison advised Major W. H. Waugh, the president of the Board, that now was the time to get a brown bear. It only took "an easy jaunt of a few hours from Cordova" to the head of Eyak Lake, or a trip to Hinchinbrook Island. Dr. Walter W. Council, a Cordova physician, and his hunting companion had bagged three brownies on the north arm of Eyak Lake. One had been a monster in size, and Council had stated "under oath that the foot-steps alone weighed one hundred and fifty pounds." and Meiers, the proprietor of the roadhouse, had told him that the "caribou are so thick beyond Paxson that they interfere with the [road] work," so Lars, an employee of the Board had to relocate his camp "as he could not force the caribou to move."²⁰

Between Meiers and Paxson

A few days later Morrison traveled over the very rough road section from Meiers to Paxson. It needed much repair and maintenance work, but he was pleasantly surprised that the stretch from Paxson to Rapids was in excellent shape. It was usually this part of the road which suffered severe heaving damage every spring during the breakup.

Game was plentiful, and Morrison told Waugh that Joe Johansen, who owned a couple of hunting cabins, one at the head of Jarvis Creek, had invited both to hunt in the area. Johansen assured Morrison that they would be certain to bag sheep, bear, and perhaps also caribou.

At McCarthy

On June 26, he was in McCarthy and complained that labor was scarce and the Kennicott mine competed with the Board for the few men available for the season. He was lucky, however, in hiring a number of men who had come up from Seattle. Ten of the men he had hired, he told the major, "were Mexicans in spite of their statements that they're Spanish." As long as they worked in a satisfactory fashion, however, nationality did not make any difference.

Morrison enjoyed his stay in the settlement of McCarthy. The weather was ideal, the men all worked in their shirtsleeves, and everybody was happy. He observed that the settlement for some time had "a crooked booze-running Commissioner...who has permitted the Red Lights and bootleggers to run the town." A week ago that man was fired and a good man appointed. Now the "inmates of the dives" all scurried for cover, and after only a few days of cleaning up, the Kennicott Corporation once again had "recognized the place as again fit for their men to visit." Morrison did not elaborate how the Kennicott employees were to entertain themselves with all the dives closed.

Visiting the North Midas

From Strelna on the Copper River and Northwestern Railroad Morrison made a short side trip to inspect the road that the Alaska Copper Corporation had built. He went as far as the junction with Ole Berg's property, the North Midas. It was a good road and almost the entire length of sixteen miles was graveled and the surface hard and smooth. Berg's branch road extended three miles to the foot of his train and crossed the Kuskalana River over a bridge jointly

constructed by Berg and the Board. Berg estimated that he shipped about one hundred tons of ore to the railroad. He asked Morrison for help in putting his branch-road into better shape. Morrison recommended that the Board spend \$2,000 on Berg's road and assumed maintenance responsibilities for the Alaska Copper Corporation road. Morrison's suggestions were in accord with Board policies to stretch available monies wherever possible to aid local economic development.

John Hajdukovich and the McCarty - Healey River Trail

Farther north, John Hajdukovich, a trader, requested that the Board improve the thirty-six mile long McCarty - Healy River trail, providing the only means of communication between Fairbanks and Richardson and the area contiguous to the Healey River. No vehicles heavier than dog sleds used it, since motorboat and poling boats operated on the Tanana during the summers carrying passengers and freight. Twelve white men and about one-hundred Indians, living as far east as Tanana Crossing, used the winter trail. It was a good one, except for Clearwater Creek and two smaller streams in its vicinity which never froze even in the coldest winters. The two streams were bridged "with wretched, ramshackle polefoot bridges which endanger the lives of the users." Hajdukovich suggested that the Board build proper bridges, and that a trapper operating a small ferry across Clearwater Creek who intended to give up the operation be induced to stay.⁴⁶ If the money could be found, the Board agreed to build the two bridges and pay the ferry operator a small sum for his services in order to keep the trail operational.²¹

F. M. Leach of Circle Hot Springs Requests a Road

While the Hajdukovich request had been a minor one, F. M. Leach, the proprietor of Circle Hot Springs north of Fairbanks, complained to Alaska's governor that the ARC had failed to connect his resort with its road stretching from Circle to 2.5 miles below the Miller

Roadhouse, a distance of some 46 miles. The construction and maintenance of this stretch had cost in excess of \$100,000. Leach and others had pleaded with ARC officials to build branch roads to connect with the mines, and were "placated with assurances that as soon as the main road was complete, branch roads would be built to the side creeks and the Circle Hot Springs." Eight years had passed since then, Leach stated, and yet less than \$3,000 had been expended, and that only on the nine mile branch to Deadwood Creek, connecting with the government road at the Central House. Not one cent had been allotted to build a road another nine miles to Circle Hot Springs. It was badly needed to give individuals suffering from rheumatism access to the baths for relief who now could not reach them during the summer. The abundance of hot water used for irrigation gave the opportunity to establish a great farm at the site, and Leach felt "that this is the most permanent asset so far discovered... this warm ground farm, free from frosts in this frozen country and this great flow of healing, revivifying water surely will be a great boon to mankind long after the placer mines have been worked out and forgotten..." But the resource had to be made accessible to the world²²

Money, Money, Money

The problem was that there was not enough money available to comply with all the requests. In fact, with America's entry into World War I Congressional appropriations for Alaskan road and trail construction decreased dramatically. In 1917, the Board received \$500,031.95 in federal monies and \$76,716.15 in territorial funds for a total of \$576,747.90. In 1919 the total had shrunk to \$299,024.26, increased to only \$358,604.25 in 1920, and stood at \$936,107.65 in 1924. Thereafter, total annual funds available hovered around approximately \$1,200,000 per year until 1933 when, because of the depression, they plummeted to \$695,036.16. Because of the shortage of funds during the war and immediate postwar years, the Board had been forced to abandon significant road and trail mileage. In fact, Colonel James G. Steese remarked in 1921, that "we have about ten million dollars worth of work in sight and are viewing with

considerable concern the possibility of our securing only about four hundred and twenty-five thousand for the next year. That would be hardly enough money to complete the rehabilitation of the existing mileage and perform the necessary annual maintenance." Steese was not far off the mark. Congress appropriated a meager \$426,807.34 in 1922. Together with territorial and private funds, Steese had a budget of \$683,247.68 at his disposal, a very small sum indeed.²³

But despite the shortage of funds, the Board accomplished much. The foreman for the Forty Mile district, Fred Price, was an observant individual. His report on the work accomplished in the 1921 season together with his reconnaissance of O'Brien and Polly creeks as a possible route for a main trunk road to Chicken and his general remarks on the mining activities follows in full:²⁴

Eagle and Forty-Mile Roads and Trails

In July I put a small crew of men to work upon the winter roads and pack trails, putting them into good shape for winter travel. As much ground as possible was covered with the money at my command. The high water of the spring caused a wash-out in the canyon leading to Gravel Gulch. A repetition of this could be avoided by a small amount of maintenance work in the spring during the high water. Cutting a channel in the ice would cost but a few dollars but would save hundreds by avoiding an occurrence of this kind. I would recommend that this be done.

Seventy-Mile

On my trip to the Seventy-Mile I found the trail leading to Alder Gulch in very bad condition, from Crooked Creek up-stream, but with the money allotted to this district there is now a good trail leading up-stream to Barney Creek. I set aside \$100.00 out of the \$1,000.00 allotted for the construction of a foot-bridge across the Seventy-mile at Nugget Gulch. This bridge is to be put in this winter, as there is no way of crossing the river at medium high water. Some parties were held up for two days before they could cross. The possibility of extending the road to Crooked Creek on the left limit is rather impractical, as there are several abrupt bluffs which would entail too much expense in getting around them. There is a good base leading up to the falls upon the right limit of Seventy-mile.

Fourth of July

In July I made an investigation of the trail leading from Fourth of July to Nation. Good work had been done there with the small amount of money at Mr. Vanderveer's command in 1920. This years work will complete the trail to Nation. This work not only leads to their camp, but is the means of ingress to an extensive country lying south of Fourth of July Creek. The mining operations on Fourth of July Creek will be worked upon a large scale, and a road is necessary. The base is good and my estimate of construction will not exceed \$50.00 per mile. It is less than ten miles to the works. I would recommend that this road be constructed if possible in the near future.

Wade Creek to Walker's Fork and Boundry Line

In traveling from Wade Creek, up Robinson Creek, to the ridge leading to Walker's Fork an easy grade is encountered. The road to Walker's Fork has a very good road-bed, continuing to the boundry line, and with a small amount of money could be put into good condition. At the time of my visit to Walker's Fork, Mr. Jacobson, who is a mining operator in that locality came from Dawson with a two horse team loaded with 800 lbs. of provisions. He informed me that the road from the boundry to Dawson was the worst part. It is about 5 miles from Jacobson's to the boundry following the right limit of Walker's Fork.

Canyon Creek

There is a very good road down Canyon Creek following the right limit slope for a distance of five miles. From this point the creek bottom is used during the winter. The freight is brought to the mouth of Canyon, thence up Canyon to Walker's Fork. There is some mining activity on Canyon and Squaw Creeks this season.

Canyon to Steel Creek

Ascending the Steel Creek divide from Squaw Creek the winter trail is followed down to Steel Creek. This is a very bad road during the winter months for traveling as the grades exceed 15% and the snow drifts upon the summit are bad. This road also leads to Wade Creek for winter freighting.

O'Brien Creek

Following up O'Brien Creek from the mouth in its entirety there is a very good road bed part of the way. The present winter road is, in my estimation, not practical for a permanent road going to the many crossings of the creek requiring too many bridges. Along the right limit, however, fairly good material is found until Columbia Creek is reached, then the present road could be followed to Liberty.

Reconnaissance of Outlets

from

O'Brien, Polly and Uhler Creeks to Chicken

From the mouth of O'Brien Creek the Forty-mile river would have to be bridged, following up the right limit to Polly Creek, thence up Polly Creek which has an easy grade, possibly a 6%. Good material is found on the left limit up to a low divide which could be followed for a short distance to the head of Uhler Creek. Uhler Creek has about the same grade as Polly Creek. Going down Uhler Creek to the mouth which is about five miles below Franklin, another bridge would be needed, crossing to the left limit of the Forty Mile River, going up river to Franklin, thence up river opposite Two-mile Creek, onto a good, dry ridge which can be followed to Chicken Creek. The approach to this ridge is a little steep but can be used.

Walker's Fork

Part of the river is in bad condition due to the fact that there are numerous large boulders in the river bed. This condition can be relieved by blasting the mouth. My recommendation is that a small allotment be made for this purpose.

Outlet to North Fork of Forty Mile

Mr. McCandless who expected to go over this route with me was unable to go so this trip was not made. Previously, however, the road was indicated on the map. This road leads from Eagle to American Creek and thence to the head of Arkansa Creek. From this point the old Government trail is followed into and down Champion Creek to the proposed power site of the McCandless Company on the North Fork of the Forty-mile River. This road would also form an outlet to the Charlie River district which is practically an undeveloped country. Mr. McCandless assured me that if the assays proved as good as previous ones taken, \$200,000 would be available next season for construction of their plant, requiring 200 tons of freight to be handled. This will of course depend upon the assay returns of the black sand, which Mr. McCandless promised to let us know. The estimated cost of this road is \$10,000 for work on the first 13 miles from discovery Fork to the head of Arkansaw Creek. This road is really necessary for the further development of the mining industry of that section and the Charlie River district.

Lumber

Some investigations have been made in regard to lumber and it was found that 60 to 70 thousand board feet measure can be secured two miles from Gravel Gulch. With a little grading the main road can be reached. There is also some good timber on O'Brien Creek

and at the mouth of Chicken Creek. The round poles used for bridges and culverts are unsatisfactory, lasting only a year or so, making it expensive to replace them each year. Mr. Powers has a saw mill on O'Brien Creek and a recommendation here would be timely that some 3" planks be sawed and delivered along the road before they get bad in the spring. The lumber at Gravel Gulch can be sawed and hauled in the summer as it is needed.

Freight Rates

Present summer rates.	* Winter rates	* These rates are
	*	* freighter's estimate
	*	* with a trunk road
	*	* Chicken.
	*	*
	*	*
From Eagle to		
Gravel Gulch 2¢ per lb.	* ¢ per lb.	* 1¢ per lb.
Liberty 7¢ " "	* 2-1/2¢ " "	* 2¢ " "
Dome Creek 10¢ " "	* 3¢ " "	* 3¢ " "
Steel Creek 15¢ " "	* 3-1/2¢ " "	* 4¢ " "
Wade Creek 20¢ " "	* 5¢ " "	* 6¢ " "
Franklin & Chicken 25¢ " "	* 5-1/2¢ " "	* 8-1/2¢ " "
Up river to N. Fork	* 4-1/2¢ " "	* -----
Above Walker's Fork	* 6¢ " "	* -----
Napoleon Creek	* 5-1/2¢ " "	* -----
1¢ per lb. added for perishable*		*

Note:

Freighting up Forty-mile costs 16¢ to Chicken. It is uncertain as a method of transportation.

From information obtained from the miners in the vicinity of Chicken and Franklin, the cost of provisions and supplies used during the past four years cost approximately \$0.75 per pound.

Activity in the District

Creeks 40 mile	* Number of men	* Class of Mining	* Estimated Output
	*	*	*
American Creek	2	* Open Cut	* \$850.00
"	1	* " "	* \$3,000.00
"	2	* " "	* Depends on water
Discovery Fork	2	* " "	* " " "
Dome Creek	12	* Hydraulic	* \$40,000.00
Down stream from	15	* 3 Hydraulic	* \$5,000.00
Steel Cr. 40-mile	*	* 12 Rocking	* \$4 to \$6 per day

Up 40-mile from Steel Creek	*	4	*	2 winter drift	*	No data
Franklin Creek	*	5	*	2 Rocking	*	" "
South Fork of 40-mile	*	1	*	Open Cut	*	\$4,340.00
	*		*	Winter Drifting	*	\$400.00
	*		*	Open Cut	*	
Chicken Creek	*	7	*	" "	*	
Lost Chicken	*	2	*	" "	*	None
Ingle Creek	*	3	*	" "	*	\$1,200.00
Littlevig Creek	*	3	*	Winter Drifting	*	\$2,300.00
Mosquito Fork	*	3	*	Scrapper Plant	*	\$18,000.00
	*hh		*		*	
Napoleon Creek	*	2	*	Open Cut	*	None
Montana Creek	*	1	*	" "	*	\$700.00
Walkers Fork	*	5	*	Scrapper Plant	*	\$8,000.00
Davis Creek	*	2	*	Open Cut	*	\$1,400.00
Wood Creek	*	1	*	" "	*	\$375.00
Squaw Creek	*	3	*	Scrapper Plant	*	No data
Canyon Creek	*	3	*	Open Cut & Winter drift.	*	\$3,800.00
Wade Creek	*	16	*	1 Hydraulic	*	\$11,300.00
	*		*	15 Open Cut & drifting	*	

Creeks 70 mile	*	Number of men	*	Class of Mining	*	Estimated Output
Crooked Creek	*	3	*	Hydraulic	*	\$5,000.00
Broken Neck Cr.	*	1	*	Open Cut	*	-----
Big Bear Bar	*	2	*	Open Cut & Rocking	*	\$300.00
Nugget Creek	*	1	*	Hydraulic	*	\$700.00
Alder Creek	*	3	*	"	*	\$4,000.00
Curtis Bar	*	1	*	Open Cut	*	\$300.00
Flume Creek	*	1	*	Hydraulic	*	\$150.00
Barney Creek	*	1	*	"	*	\$200.00
Fox Creek	*	2	*	"	*	No data
Fourth of July	*	7	*	"	*	Depends on water
Ruby Creek	*	1	*	Winter Drifting	*	\$300.00
Washington Creek	*	1	*	Prospecting	*	-----
Mission Creek	*	1	*	Open Cut	*	\$300.00
Estimate	*	5	*	In outlying districts	*	-----

Note: -

The output may be increased after September 1st owing to heavy rainfall. The output of Dome Creek will probably reach the \$150,000 mark as better ground has been found since the estimate was given. Miners usually yield \$3.00 per gold pan washed.

Mail Service

There is semi-monthly service to the creek, each mail having a weight limit of 600 pounds. On the 15th of July there was in the post-office at Eagle, 3,600 pounds of mail and unless a special contract is issued the mail will lay until it can be taken over the winter trail, causing a considerable inconvenience to the miners. Mr. Powers, the present mail carrier assured me that with a good road these conditions now existing would be relieved. Furthermore the contract for carrying the mail could be cut one third a year making a saving to the Government, amounting to \$2,600 which in a short time would pay for the construction of the road.

Summary

Being conversant with mining conditions, it is in my judgement not a worked out district, but one with a future before it, second to none in the Yukon. This district has been producing, extensively for the past forty years. During the war it of course received a setback, but with good roads and trails, and a reduction in the cost of produce will induce younger blood to enter the country.

The Eagle - Forty Mile and the surrounding districts have a bright future.

Russian River - Kenai Reconnaissance

This narrative report could include numerous examples of Alaskan ire at the Alaska Road Commission, but illustrative cases show that northerners were vociferously unhappy if any of their petitions were denied or delayed. Without attempting to exonerate the Board from all criticism it is important to show that its staff investigated conditions on the trails and roads, and in the remote back country as well. There is no more effective way to show how the necessary work was accomplished sixty years ago than by including the full report of a Russian River - Kenai Reconnaissance trip submitted in March, 1923:²⁵

1. The reconnaissance was made during the month of March, 1923. Fifteen days time required from March 1st to 15th inclusive. Employed one man as guide, also one dog team consisting of three dogs and one light sled. Small amount of provisions was also purchased and used on the trip.

Made the trip in four days each way actual traveling time from Moose Pass to Kenai and from Kenai returning to Moose Pass. Two

days snow shoeing was required on each way of the trip, this being due to a very heavy snow storm and winds.

Snow conditions from Moose Pass Station, U. S. Railroad to Kenai. The snow at Moose Pass is approximately four feet deep. The snow down along Kenai Lake and the upper Kenai River is one foot six inches deep. Then as we approached Kenai town the snow was deeper measuring about four feet on an average. The winter 1922-1923 has been one of much snow fall in the vicinity of Kenai. The average snow fall this section of the country is twelve to fourteen inches.

Seven days were spent making side trips from the main line of travel. The present line of travel in many sections of the trail should be changed to a new location in the timber rather than to be located on the sloughs, creeks, rivers and lakes, which are late to freeze up and often early to open up in the spring; also requiring every one who travels to break trail every trip they make through the open country.

There is very little cutting or marking of trail to guide the travelers and during a snow or wind storm it is very dangerous to travel. The trail can be shortened. The approximate distance as now traveled estimated to be one hundred five miles, also estimated the route can be shortened approximately twenty miles thus making the entire distance from Moose Pass to Kenai approximately eighty five miles and under favorable conditions the trip could be made in three days travel.

There are several cabins along the trail that can be used for shelter, also along the central part of part of the trail the mail carrier erected two shelter tents 12' x 12' and provided them with stoves. This is done each winter and provides very good shelter for the general travel, however there should be erected several log shelter cabins, about fourteen by twelve feet with one door and one window and a pole roof covered with twelve inch layer of moss and then covered with corrugated iron.

Beginning at Moose Pass or mile one of the Moose Pass-Sunrise trail which begins at Mile twenty nine U. S. Railroad, Enroute for Kenai the travel is upon a lightly constructed wagon road to Mile eight and one half where the travel turns out to the left across a small lake, called Mud Lake, then the travel continues down a small creek in a canyon, which is called Bear Creek, then from Bear Creek the travel continues down a much larger creek valley called Quartz Creek. After traveling down Quartz Creek Valley the trail then crosses the lower end of Kenai Lake. The trail which is traveled from where it turns out of the Moose Pass-Sunrise Road at Mile eight and one half to the lower end of Kenai Lake is seven and one half miles and has never been cut out for a dog team, only as the travelers themselves have been

forced from time to time to cut away a wind fall tree or occasionally a drooping willow or alder that would catch the sled or load thereon.

This section of the trail should be cut out for dog teams and double enders, the brush and trees are quite thick and some places heavy timber is to be encountered. Estimate the cost cutting this section of seven and one half miles of trail at \$450.00. Six small bridges at fifty dollars each, three hundred dollars. total cost \$750.00.

Shelter cabins on this section. There is a homesteader at the junction of the Moose Pass-Sunrise wagon road where travelers are welcome to stop, also about four miles up Quartz Creek from Kenai Lake there is a log cabin approximately 12' x 16' equipped with stove and etc. The cabin is in first class condition.

The usual travel goes from mile 23 U. S. Railroad, or Roosevelt over the ice down Kenai Lake to the Lower end, under varying conditions. There are some years the Kenai Lake does not freeze safe to travel on, also the lake is very late to freeze up. For the above mentioned conditions the trail should go by the way of Moose Pass, therefore assuring early and late travel with safety each year.

Here at the lower end of the Kenai Lake the wagon road survey crosses the lake and continues down the south side of the river, for several conditions the survey for the wagon road should have continued down the north side of the Kenai River, and not crossed at the lower end of Kenai Lake.

From the lower end of Kenai Lake on the north bank near Quartz Creek mouth, the winter trail crosses Kenai Lake and continues down the south bank a distance of about three miles to the lower landing stations, where Louis Bell and Mr. Fuller each have a large comfortable well constructed cabin, also some outhouses for dog shelter; and who are always willing to accommodate travelers. Then about one and one half miles below Mr. Bell's place there are the other cabins where travelers can also stop. From this lower landing the Bureau of Public Roads have constructed a light wagon road for a distance of approximately 5 1/2 miles along the south bank of the Upper Kenai River. Then crossing the river near Schooner Bend, this crossing consists of three seventy foot trusses constructed of native timber also one hundred feet of trestle approach, pile driven bents, width of bridge twelve feet. This structure was erected in the fall and winter 1920. Then the lightly constructed wagon road continues down the north side of the upper Kenai River for a distance of approximately two miles. From the end of the graded wagon road a narrow right of way has been cut along the foot hills and a very narrow trail graded along the steep banks and

holding to the bench flats wherever possible, for a distance of four miles.

At this point the trail turns north and leaves the river and follows up a small creek then through a low pass on to a deep lake about one mile long and three eighths mile wide. From there the trail leaves the Kenai River and continuing up the small creek to the lake a distance of four miles. The right of way has been cleared and not graded. This section should be graded as it is very difficult to travel along a hillside early in the fall of the year and no snow for the sled to run on also to keep the same from turning over. There are several very narrow places of the grade section along the Kenai River bank on the north side.

Estimated cost of repairs and reconstruction of this trail section from the landing on lower Kenai Lake to the shelter tent in the lower pass which is a distance of approximately fifteen miles. Four miles of widening the grade for sleds at some of the narrow points. Estimates \$300.00 per mile making total cost of widening the trail \$1,200.00. Estimated grading hillside for sled road at \$500.00 per mile will make a total \$2,000.00 for grading this section.

Then from the tent in the low pass on to Kenai a distance by way of the present trail approximately seventy miles continues through a low swamp, and lake country. This section of the trail should be relocated through the timber section, and well cut out and tripoded where same is laid out across sloughs or lakes. Some ten or twelve miles of this trail follows down Moose River which is a winding sluggish stream and does not freeze up very solid also over flows and causes much trouble. The entire trail can be well located in the timber. Estimated cost of cutting this section of the trail for dog sleds at sixty dollars per mile and seventy miles to be cut out would equal \$4,200.00 total cost including all necessary small bridges.

There should be three new shelter cabins constructed between Moose River and Upper Kenai River, estimate cost of the cabins \$250.00 each, making a total cost \$750.00.

Estimated cost of repairs and construction of winter sled trail from Moose Pass Station at Mile 29 U. S. Railroad through to Kenai which would be for the use of dog teams, also horses and double enders could be used on this trail from time to time as such should be required, the amount would be \$8,900.00 to be expended as reported herein.

The work from Moose Pass Station to where the trail leaves the upper Kenai River is included in the Bureau of Public Roads district. Should any work be considered the section between

Moose Pass road and Kenai Lake is most needed and should be cut out first, then the next section of this trail should be the first seventy miles out of Kenai Station also, three shelter cabins. Then last of all the central part of the trail and road along the upper Kenai River.

Should at any time a wagon road be considered the same should be constructed along the north side of the upper Kenai River down to Skilak Lake then along the north side of Skilak Lake to the Lower Kenai River to the mouth of Moose River, and a one hundred fifty foot suspension type bridge should be used. Then the road should leave the Lower Kenai River and take a direct course for Kenai Station.

The country through this section is ideal for wagon road construction. Most of the country is dry gravel benches with some small outcroppings solid rock of which is mostly composed of slate. Estimate the cost of constructing a wagon road through this section to cost from seven to ten thousand dollars per mile. Plenty timber available for all small bridges, as there would not be many required.

Under present conditions there has been but very little work done on the last seventy miles of trail out of Kenai, should this trail be cut out for travel, eliminating many short unnecessary crooks and turns which have been created by driving through the timber dodging trees to eliminate cutting as much as possible.

Should a good trail be cut out, two round trips per month could be made as easily and cheap as under present conditions, and only making one round trip per month. The mail contractor has contracted all mail offered, one trip per month. Heretofore the amount of mail has never exceeded four hundred pounds, sometimes only one hundred fifty pounds received. The last trip or March trip the mail carrier received seven hundred eighty pounds mail mostly parcel post. The trail being so crooked and narrow, the longest he can use is a ten foot long sled and is very difficult to handle, also four hundred pounds is about the limit for the sled in weight. Therefore the mail carrier was compelled to relay his mail and it will take him about twenty days to make the round trip and will also be about ten days late with the mail arriving at Kenai. The mail offered each year is increasing rapidly.

The school at Kenai has eighty seven pupils enrolled. Three teachers employed. One church and two stores, also a U. S. Commissioner's precinct. Two fish cannerys, one owned by the Northwest Fisheries and the other by the Libby-McNeil Company. Both Cannerys to be operated season 1923, Current report.

Much fur is produced from trapping wild fur bearing animals also from fur farms which are becoming very numerous. Reported six new fox farms to start this season. The winter population of Kenai is estimated at five hundred most of whom are Russians and native indians. There being no doctor in Kenai all persons seeking medical aid have to be hauled out on dog sleds or take the chances and wait over until navigation opens so they can be removed by boat to Anchorage or elsewhere.

A trail should be cut from Kenai to the Coal Bay of Homer Post Office, Kachemack Bay, which is a distance of approximately seventy miles. This would permit winter travel about the coast also give access to the many fox farmers and few ranchers living along the coast. This entire section of the country is much in need of trails.

Should this trail and road to the Lower Kenai or Skilak be constructed and repaired it would not only afford much better travel for the Kenai vicinity, also would help to open up one of the best game and scenic sections of Alaska.

This is one of the best and largest moose pastures in Alaska, also the brown and black bear are numerous. This section affords one of the best hunting grounds in Alaska, both for local people and the trophy hunters who come to Alaska and hunt with guides. There are many sections of land in the Kenai Valley where settlers can take up homesteads. Roads and trails would greatly improve this condition.

2. The following is a summary of the estimated cost of improvements and repairs, advised to be made on this project, season 1923.

7-1/2 Miles	Cutting Trail	@ 60.00	450.00
4 "	Widening Grade	300.00	1,200.00
4 "	Hillside Grade	500.00	2,000.00
70 "	Cutting Sled Trail	60.00	4,200.00
6 Bridges	Small Log	50.00	300.00
3 Cabins	New Shelter	250.00	750.00
Total Amount Estimated			\$8,900.00

3. Expenses on the Russian River-Kenai Reconnaissance were as follows:

15 days hire one man with sled and equipment	150.00
at 10.00 per day	
Provisions and supplies	16.85
Dog Fish, 60 pounds @ .20	12.00
One pair snow shoes	11.55
Total Expenses	<u>\$190.40</u>

Other such work reports are included as additional illustrations of the work required from Board personnel. These samples have been selected from hundreds of similar reports dealing with various parts of Alaska. They tell more about travel conditions than a mere summarization could convey, and they also establish that an orderly process in settling construction priorities was well established by the 1920s.

Annual Appropriations

Throughout the history of the Board of Road Commissioners for Alaska the time lines of the annual appropriation remained a matter of concern. Prior to 1919 appropriations were not available until the first of July, the beginning of the fiscal year. To make effective use of Alaska's short construction season it made sense to purchase supplies and freight them to work locations in the winter, but this could not be done unless money remained from the previous year's appropriation. Congress helped the situation in 1919 by authorizing the immediate use of money as soon as the appropriation was approved. But delays in starting construction still occurred when Congress did not pass the appropriations until late in the fiscal year and, particularly, when the bill was held up until the early part of the next fiscal year. Congress found a remedy in 1922 when it authorized the Board to incur obligations prior to July up to a limit of fifty percent of the budgeted appropriations. Congress made the same provision in 1923, but in 1924 it dropped this authorization for indebtedness from the bill. The Board members were dismayed. It seemed as if Congress just could not understand Alaskan conditions.²⁶

Congress did achieve a more lasting reform in 1922 by specifying that the Secretary of War was responsible for "military and post" roads in Alaska and for "other roads, bridges, and trails" as well.²⁷ Coupled with this change was Congressional approval of the War Department's transfer of road appropriations to Title II, Nonmilitary Activities. This change was of considerable benefit to Alaska. Roads funds would no longer be charged against the support of the Army and subjected to the spirited efforts of the military brass to divert funds for other purposes.

Alaska Railroad and Alaska Road Commission Separated

As already stated, the railroad and road activities were separated in 1924. Board President Steese had applauded the consolidation of roads and railroads under his direction when it was made the previous year. Now he faced the prospect of dual competing transportation administrations once again. His disgust triggered an unprecedented sharp complaint in his 1924 report. No reason was assigned for this "sudden and unexpected change of policy," he remarked. And the separation of authority "partly broke the only effort successfully made in coordinating and consolidating some of the activities of the 38 or more federal bureaus attempting to run Alaska from Washington, D.C."²⁸

Steese's reference to "38 or more federal bureaus" was the first direct public statement any Board president had ever made to the administrative chaos that had always threatened road and trail work in Alaska. Briefly he had abandoned the venerable pretense that the several federal agencies cooperated gracefully to resolve construction priorities.

President Warren G. Harding Visits Alaska

Perhaps some of Steese's problems could be traced to expectations raised by President Warren Harding's 1923 visit to Alaska. Harding's chief purpose in Alaska was the dedication of the Alaska Railroad, but he did join Steese and other officials on inspection tours of the Richardson Road, motoring for 20 mile stretches out of Fairbanks and Valdez, respectively. Then, after reaching Seattle, President Harding made a speech which included remarks of heartwarming cheer to Alaska's road proponents:

In another direction there is justification for a most liberal disposition -- that of road and trail building... Roads constitute a prime need in every new country, and our long national experience in pushing our highways ahead of the controlling wave of settlement ought to convince us that the broadest liberality towards roads in Alaska will be certain to bring manifold returns . . . The present road system is but a beginning, and I am willing to be charged with a purpose of something like prodigality in my wish to serve Alaska generously, and more, in this matter of road building.²⁹

Alas! President Harding had no time to demonstrate his "prodigality." He died a few days later.

Washington Does Not Understand Alaska

Certainly Steese's disappointment over any changes which he considered setbacks to his efforts can be understood. At times the Board members felt overwhelmed by their responsibilities and the magnitude of their task. On occasion Steese tried to express his duties in terms that might capture the imagination of distant Washington bureaucrats. Consider, he wrote in 1922, "the magnitude of a task that takes two years of continual traveling with the best facilities for a single individual to make a complete inspection of the entire mileage of road and trails in Alaska."³⁰

Steese also wanted it understood that the Board members were not desk-bound paper shufflers: "The President and the Engineer spend eighty percent of their time in the field"⁵⁶ It is a little hard to see how the two chief officers managed such extensive field work with interdepartmental meetings and the flow of paperwork, but there is no reason to dispute Steese's statement.

Another technological advance created more work for the Board in the 1920s. Increasing numbers of airplanes were based in Alaska. Someone had to build airfields, and the powers in Washington determined that the Board had to undertake such construction. Help in this task soon came, however, when the territorial legislature appropriated money for airfields in its 1925 session, and also statutorily entrusted the Territorial Board of Road Commissioners with the job of designing and constructing such facilities.³¹

Others could confirm Steese's view of the administrative confusion in Alaska's road management. General A. W. Greely, the famed polar explorer, praised the Board's work but deplored that "unfortunately, under the uncoordinated activities, there are four other bodies engaged in road building . . . a manifest waste of administrative energy."³²

General A. W. Greely

Greely, who had been assigned to work in Alaska for the military telegraph early in his career, was pleased that travelers could finally reach Eagle without passing through Canada, and amused that Juneau's 300 automobiles shared 30 miles of road. To his readers he emphasized the significance of Fairbanks as "the center of the Alaska road system." Roads out of Fairbanks reached the adjacent mining districts and fanned east to the Salcha Valley; northeast to Circle, Eagle, and Dawson; northwest to Hot Springs -- "this last most important, the great winter mail route to Fort Gibbon (Tanana); to the entire Yukon Valley; to the Koyukuk; and to the Seward Peninsula and the Arctic."³³

Carrying the road north from Fairbanks to the Yukon had not been easy because of the high maintenance demands for the Richardson Highway, and construction priorities in other regions. But by 1924, the links to the north could be used by wagons during the summer for 100 of its 160 miles distance, and in winter travelers could drive their double ender bobsleds over the full route. Getting the road to such a state was the realization of a long-deferred dream. There were many folks living in Fairbanks who recalled the hard trails and trailless tundra they had been forced to tramp.

The Governor of Alaska

Like the Board of Road Commissioners, the governor of Alaska reported each year on all territorial activities including transportation data gleaned from the Board's reports. The chief executive was ever an avid proponent of better roads and trails. Annually the governor repeated the same language in opening his discussion of transportation: "The great outstanding problem of Alaska is that of transportation."³⁴ All forms of transportation should be improved, but "the crying need of the Territory is for roads; Alaska will never reach a high state of development until a system of good roads covers the entire country."³⁵

The governors always praised the work of the Board of Road Commissioners and emphasized the difficult terrain of Alaska. They stated, for example, that "almost all routes of travel cross long stretches of boggy country over which it is impossible to drag a wagon. . . Appropriations of \$750,000 or \$1,000,000 per annum would only be a fair amount with which to continue this excellent construction work..."³⁶

After the intensive work done on the Richardson Highway in anticipation of President Harding's visit, the long route to the interior was in good shape, and graveled for much of its length. The state of the Richardson Highway meant much to Alaskans as an amenity of civilization and commerce -- and for its promise of development. But it would be fair to point out that the territory's major road was not thronged with traffic. In 1923 the governor tried to keep an accurate check on the road's traffic. His count may have missed some furtive voyages, but he stated his tallies with some satisfaction:

- 1,517 persons
- 87 motor vehicles
- 30 wagons
- 24 double hobsleds
- 26 pack horses
- 384-1/2 tons of freight³⁷

Slim figures? Well, that depends on one's particular point of view. The governor remembered that only a few years earlier Alaskans had to depend entirely on rivers or rough winter dog trails. Now eighty-seven automobiles and trucks had passed along in comfort and speed. That was progress! And, after all, the number of vehicles might well have been in thousands -- and certainly would be soon.

Appropriations Increase

Despite the disappointments of Steese and Alaskan residents who longed for a better road system, congressional appropriations were increasing significantly in the mid-1920s. Compared to the low appropriations of \$425,000 in 1921 and \$465,000 in 1922, the appropriations for

the 1923, 1924, and 1925 working seasons were \$650,000, \$780,000, and \$900,000, respectively.⁶⁴

The \$900,000 for 1925 (actually fiscal year 1926, but funds could be utilized for working season 1925) was close to the \$1,000,000 annual budget stipulated in the 10 year plan of 1920.

By 1921, the Board of Road Commissioners had also become known as the Alaska Road Commission, and it was the latter term which was used at the end of the era under consideration. The future looked fairly bright. The wartime neglect and tardiness of postwar recovery seemed to have reached a point of reversal. The Territorial Board of Road Commissioners vigorously participated in many projects and contributed sorely needed dollars. America in the 1920s represented a remarkable picture of prosperity. Belately, it appeared that Alaska, still sulking in the economic woes of the war and mining declines, might benefit substantially from the national prosperity. Perhaps soon a motorist could speed the entire distance from Valdez to Circle on improved, surfaced roads!

Footnotes

1. Annual Report of the Alaska Road Commission, Fiscal Year 1920, pp. 61-65.
2. F. M. Leach to Governor Thomas Riggs, June 12, 1919, Alaska Road Commission, R. G. 30, F.R.C., Seattle Washington.
3. Governor Thomsas Riggs to Chairman, Alaska Road Commission, January 5, 1920; Captain John Zug to John H. Joslin, January 8, 1920; R. G. 30, F.R.C., Seattle, Washington.
4. John H. Joslin to Captain John Zug, January 30, 1920, R. G. 30, F.R.C., Seattle, Washington.
5. Petition to Alaska Road Commission from Circle, undated, probably February, 1922, R. G. 30, F.R.C., Seattle, Washington.
6. Hawley W. Sterling to the Board, April 14, 1922, R. G. 30, F.R.C., Seattle, Washington.
7. James G. Steese to Circle residents, May 12, 1922, R. G. 30, F.R.C., Seattle, Washington.
8. Annual Report of the Alaska Road Commission, Fiscal Year 1922, pp. 2237-38.
9. Ibid., part II, pp. 6-7
10. Annual Report of the Alaska Road Commission, Fiscal Year 1923, p. 2087.
11. Hunt, North of the 53°, pp. 251-257; see also William H. Wilson, "Alaska's Past, Alaska's Future, " Alaska Review, Spring and Summer, 1970, pp. 1-12.
12. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2100-2101.
13. Ibid.
14. William H. Wilson, Railroad in the Clouds: The Alaska Railroad in the Age of Steam, 1914-1945 (Boulder, Colorado: Pruett Publishing Company, 1977), pp. 84-85.
15. Ibid., p. 156-159.
16. Annual Report of the Alaska Road Commission, Fiscal Year 1923, pp. 2102-2104.

17. Annual Report of the Alaska Road Commission, Fiscal Year 1925, and other reports of the 1920s.
18. Narrative monthly reports ,June, July, August 1918, box 65418, Alaska Road Commission, R. G. 30, Federal Records Center, Seattle, Washington.
19. C. G. Morrison to Waugh, May 23, 25, June 26, 27, 1919, box 65481, Alaska Road Commission, R. G. 30, Federal Records Center, Seattle, Washington. All quotes are from this document.
20. C. G. Morrison to President of the Board, October 2, 1919, Alaska Road Commission, box 65480, R. G. 30, Federal Records center, Seattle, Washington.
21. District Engineer to President of the Board, October 2, 1919, R.G. 30, Alaska Road Commission, box 65480, Federal Records Center, Seattle, Washington.
22. F. M. Leach to governor, January 2, 1920, Alaska Road Commission, box 65480, Federal Records Center, Seattle, Washington.
23. Alaska Road Commission, Annual Report of the Alaska Road Commission (Juneau, Alaska, Fiscal Year 1933), p. 2; Steese to Macnate, November 12, 1921, Alaska Road Commission, box 65479, R. G. 30, Federal Records Center, Seattle, Washington.
24. Price to Alaska Road Commission, November 5, 1921, Alaska Road Commission, box 65480, R. G. 30, Federal Records Center, Seattle, Washington.
25. Walter W. Lukens to Engineer Officer of the Board, March 9, 1923, R. G. 30, F.R.C., Seattle, Washington.
26. Annual Report of the Alaska Road Commission, Fiscal Year 1925, pp. 2070-2071.
27. Ibid., p. 2071.
28. Annual Report of the Alaska Road Commission, Fiscal Year 1924, p.iii.
29. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2070.
30. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 10.
31. Annual Report of the Alaska Road Commission, Fiscal Year 1926, p. 1956; Session Laws of Alaska, 1925.
32. A. W. Greely, Handbook of Alaska (New York: Charles Scribner's Sons, 1925), p. 41.

33. Ibid., p. 42.
34. Annual Report of the Governor of Alaska, (Washington, D. C.: Government Printing Office, 1920), p. 10. Hereafter cited as Annual Report of the Governor of Alaska and year.
35. Annual Report of the Governor of Alaska, 1919, p. 47.
36. Ibid.
37. Annual Report of the Governor of Alaska, 1924, p. 18.
38. Annual Report of the Alaska Road Commission, Fiscal Year 1925, p. 2069; Annual Report of the Alaska Road Commission Fiscal Year 1926, p. 1954.

CHAPTER SEVEN

THE MIDDLE YEARS OF THE 1920s

Almost from the beginning, the Board of Road Commissioners for Alaska had been referred to as the Alaska Road Commission. In fact, banks, mercantile establishments and dealers with whom the Board conducted business soon did not recognize the official title of the organization. But until about 1925, all forms used by the Board continued to have the heading "Board of Road Commissioners for Alaska." In that year, through informal instruction of the president of the organization, the forms were changed and henceforth read "Alaska Road Commission".¹

Board of Road Commissioners Becomes Alaska Road Commission

When Major James G. Steese, submitted his annual report to the War Department on October 5, 1926, the president of the organization used the name "Alaska Road Commission". As on previous occasions, he summarized the statutory origins and the history of his organization. He pointed out that until the retirement of Colonel Richardson on December 29, 1917 the board had reported directly to the War Department through the Adjutant General. This arrangement probably reflected the good rapport Richardson had enjoyed both with the Adjutant General and the Secretary of War. When Richardson left, the Secretary of War gave orders that the Alaska Road Commission be placed under the general supervision of the Chief of Engineers.²

Steese reported that the Alaska Road Commission maintained its headquarters in Juneau, and ran suboffices, when required by active operations, at Valdez, Chitina, Fairbanks, Eagle, Nenana, Anchorage, Seward, Takotna, and Nome; and also in Seattle, Washington and in the nation's capital. Steese obviously took pride in the accomplishments achieved over a twenty-two year period. It had constructed 1,433.5 miles of wagon road, 100 miles of tram road, 1,086 miles of sled road, 6,671.5 miles of permanent trail, and 712 miles of temporary flagged

trail for a total of 10,003 miles.³

Major Steese Dissatisfied

Despite these gains, Steese was dissatisfied. He pointed out that the Alaska Road Commission had proposed a comprehensive ten-year construction program and asked for specific annual appropriations to carry it out. Unfortunately, however, the total appropriations for the first five years had been less than half the estimates, and about three-fourths of the available funds had been required for repairs and maintenance. Instead of receiving the \$6,655,000 asked for for the first five years, Congress only had appropriated \$3,220,000. Steese recommended that construction work be speeded up in order to realize the maximum benefit from the work already accomplished. Accordingly, the Commission had revised the ten-year program in 1924 and recommended the following appropriations for the second five years of the program period:⁴

(a) For maintenance of existing routes, at \$542,00 per year	\$2,710,000
(b) For improvement of existing routes to the same standard throughout	\$2,600,000
(c) For completion of projects already undertaken	\$1,735,000
(d) For completion of projects already approved but not yet undertaken	\$1,780,000
(e) For completion of projects likely to arise with development during the five years . .	<u>\$1,135,000</u>
Total for five years	\$9,960,000
Less Alaska fund and Territorial contributions (estimated)	\$ 960,000
Net federal appropriations	\$9,000,000

Shortage of Funds

Yet, despite earnest pleading, Congress had seen fit to appropriate only \$900,000 of the \$1,750,000 needed for the fiscal year 1927 or the working season of 1926 to realize the goals of the second five-year period. But despite the shortage of funds, the Commission had continued the work begun in 1920 of rehabilitating the roads and trails in remote sections of Alaska. In addition, new construction of 67.5 miles of wagon roads, 14 miles of sled roads, 212 miles of trails, 380 linear feet of bridges of 60-foot span and over, and 8 airplane landing fields had been accomplished. Some 62 miles of wagon road had been reconstructed, 96 miles of wagon roads graveled, 5 miles of the Nome-Shelton tramway raised to standard of 10-ton loads, and many small bridges and culverts had been rebuilt. The employees of the Commission also maintained 1,035 miles of wagon roads, 95 miles tramway, 935 miles of sled roads, 3,631.5 miles of permanent trails, 368.5 miles of temporary flagged trail, and 400 miles of telephone lines. It was an impressive achievement.⁵

New Construction

Steese related that the Commission had undertaken new construction on the following roads:

The Haines - Pleasant Camp, McCarthy - Nizina, Chatanika - Circle, Mount McKinley National Park, Gulkana - Chistochina, Long - Poorman, and Ophir - Takotna. In addition, the extensive bridge program begun in 1925 continued, and Alaska Road Commission crews newly constructed or extensively repaired bridges across the Savage and Sanctuary Rivers in McKinley Park, Big Goldstream, Hot Springs Slough, Valdez Glacier Stream, Bear Creek, Klutina River, Miller's Glacier Stream at mile 223, Banner Creek, Gasoline Creek, and Tanana Slough at mile 348.⁶

Steese wrote that automobile use in the territory had increased rapidly in the last few years, and estimated that motor cars and trucks handled about ninety percent of the traffic on the main wagon roads.

This heavy use had greatly increased the cost of road maintenance. The Richardson Highway bore the brunt of this increased traffic. Traffic reports for the 1925 calendar year showed the following movement over the highway:

4,208 persons, 1,853 motor-driven vehicles, 139 wagons, 479 double bobsleds, 6 pack horses, and 1,704 tons of freight.⁷

Steese estimated that within two more working seasons it would be possible to have the Richardson Highway completed to a uniform standard and graveled along its entire 410 mile length. Finally, about 110 miles of the planned 165 mile extension from Fairbanks to Circle on the Upper Yukon had become passable for wagons in the summertime, while double bobsleds used the entire length during the winters. He warned, however, that unless Congress appropriated more money, little could be done to meet the pressing needs for the improvements and extensions of the systems and especially in constructing the badly needed highway and trail feeders to the Alaska Railroad.⁸ This was very important because it would help developing local industries and provide freight for the railroad.

New Equipment Purchases

Steese was proud of the mechanical equipment the Alaska Road Commission had acquired. High labor costs and maintenance of horses had forced the Commission to mechanize its operations. A list of equipment acquired over the years follows:

10 Auto Trucks, Dodge.	1 Loader, Bucket, power driven.
71 Auto Trucks, Ford	1 Locomotive, Fordson.
39 Auto Trucks, G.M.C.	2 Machines, mowing
4 Auto Trucks, Packard.	1 Mixer, concrete.
1 Auto Truck, Pierce Arrow.	4 Piledrivers.
5 Auto Trucks, White.	54 Plows,
1 Boiler, Piledriver.	1 Plow, Snow, lateral rotary type.
2 Cars, Gasoline section.	3 Radio outfits.
4 Cars, Roller bearing push.	8 Rollers, road.
2 Compressors, Air.	3 Saws, power driven.
2 Crushers, Stone.	1 Scarifier.
1 Drum, hoisting.	78 Scrapers, slip.
25 Drags, Road.	10 Scrapers, wheel.
1 Drag, planer.	2 Scrapers, Fresno.
2 Drag lines, gasoline.	1 Shovel, 3/4 gd. steam.
2 Derricks, motor.	

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|---|---------------------------------------|
| 2 Ditchers, road. | 3 Shovels, 1/2 gd.
gasoline. |
| 1 Engine, Donkey | 70 Sleds, bob. |
| 9 Engines, Hoisting. | 8 Trackers, Best 30. |
| 14 Graders, road, tractor drawn. | 16 Tractors, Holt. |
| 22 Graders, road, horsedrawn. | 1 Tractor, Case. |
| 4 Graders, power with Fordson
Tractor. | 1 Tractor, Fordson, crawler
space. |
| 4 Levels, surveying. | 83 Wagons. |
| 2 Tractors, Titan. | 1 Welder outfit. |
| 1 Tractor, Yuba. | 5 Winches, hand. |
| 36 Trailers, Highway. | |
| 8 Transits, surveying. | |

During the fiscal year, the Commission purchased the following equipment:

- | | |
|--|---|
| 11 Trucks, Ford, 1 yd. dump. | 4 Graders, Tractor drawn (Adams). |
| 5 Trucks, Ford, light cargo. | 2 Graders, Horse drawn (Adams). |
| 3 Tractors, Best 30. | 1 Shovel, Gasoline, Byers 1/2 yd. |
| 1 Tractor, Fordson, with
crawler tread. | 1 Loader, Bucket, Power driven. |
| 3 Graders, Gilbert with Fordson
tractor attached. | 1 Compressor, Air, Portable. |
| | 1 Snow Plow, lateral rotary type. |
| | 4 Dump bodies, 1 yd., for Ford
trucks. |

Additionally, the Army turned over the following pieces of surplus stock to the Alaska Road Commission:

- 25 Trucks, G.M.C. 3/4 ton.
- 17.25 Tons Pyrotol.
- Miscellaneous small surveying instruments and drafting supplies.⁹

Road Construction Expensive

Despite the impressive inventory of mechanical equipment, worth about \$500,000, road construction was very expensive because of the high territorial wage scales, averaging from \$3.50 to \$6.00 per day for common labor, including board, and the high cost of supplies. Steese also pointed out that Alaska's size, difficult geography and climate, in addition to high costs, made comparisons with road work in the contiguous states difficult. Alaska road construction, Steese observed, included the cruising, clearing, grubbing and actual construction all in one operation. In the contiguous, settled parts of the United States these processes had started in pioneer days. Indeed, Steese remarked, the magnitude of the task and extent of territory

covered by the far-flung activities of the Commission were illustrated by the fact that it would take two years of continuous traveling with the best facilities available for a single individual to make a complete inspection of the entire mileage for which the Commission was responsible. Lest his readers thought that Commission members were office-bound bureaucrats, Steese hastened to add that "actually the President and the Engineer Officer spend about 80% of their time in the field. They have visited every district and have inspected most of the sub-projects a number of times." While these two spent about 80% of their time in the field, the Secretary and Disbursing Officer had overhauled the property, accounts and office methods and visited the district offices to make them conform to the new procedures.¹⁰

Territorial Cooperation

Cooperation with the Territory remained excellent. Initially based on the Territorial Cooperative Road Act of April 21, 1919 and an Act of Congress approved June 30, 1921, the Commission had entered into additional cooperative agreements for work supported partially by federal and territorial funds. For the fiscal year 1926, cooperative projects had been allotted \$86,772.91 in Alaska Road Commission monies, \$101,765.00 in territorial funds and \$2,819.01 in miscellaneous contributions. These monies had been spent on shelter cabins in the second, third and fourth judicial divisions, aviation fields in the second and fourth judicial divisions, telephone lines, the Nome harbor, Seward Peninsula Tramway and the Tolovana Tramroad and the Nizina Bridge. Other cooperative projects were planned for 1927. Steese thought that the amount of roadwork accomplished for the money expended had "been far in excess of anything heretofore possible." Indeed if the Territory had attempted to expend its \$30,000 per division under an independent organization, nearly one-third of the available funds would have gone into overhead, salary and expenses of a divisional chairman and clerk, rent, light and other items. Under the cooperative agreement, the Alaska Road Commission furnished all of this free without any additional costs to

itself. Additionally, the Commission made available its extensive plant and mechanical equipment to territorial road work without extra charge except for fuel and ordinary repairs. And since Commission activities covered all of Alaska, it was possible to use Territorial money in outlying projects where the maintenance of an independent organization would have been impossible or prohibitive in cost. Most importantly, perhaps, all monies were lumped together and expended on a comprehensive transportation system with a continuity in plans and consistency in operations over an extended period of years.¹¹

If the Territory benefited under the terms of the Cooperative Road Act, so did the Alaska Road Commission. The availability of larger funds enabled the consolidation of supply purchases and with it lower prices. And having monies become available throughout the year, minimized the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of the open working season. This made the entire organization and conduct of operations more flexible.¹²

Historical Summary of Organization

President James G. Steese also found it appropriate to summarize the history of the Commission after the completion of almost twenty-two years of service to Alaska. He divided the twenty-two years into three periods. The first covered the administration of General Richardson from 1905 to 1917. This was the pioneering period which covered nearly all of the stampedes to Alaska. Settlements and lines of communication were very primitive. With small but increasing appropriations, Richardson intelligently developed the rudiments of an Alaskan transportation system. In 1913 he drew up a comprehensive operations program which called for the expenditure of \$7,500,000 during the succeeding ten years. Indeed, during Richardson's last two years in Alaska Congress appropriated a high of \$500,000 each year for the work. The Richardson Highway was the Commission's largest project throughout the period. Running from Valdez to Chitina and thence to Fairbanks, it had become passable throughout its length for dogteams by 1907, by 1910 for

light horse-drawn wagons, and in 1913 the first light automobile made the entire trip from the interior to the coast. The pioneer period, in short, laid the foundation for all future work and terminated when Richardson was called to service in the European War in December 1917.¹³

The Period From 1917-1920

The second period spanned the years from 1917 to 1920, characterized by a general stand-still of Commission work and the cessation of economic development within the territory. Congress appropriated very little money, and during the last two years reduced funds to a mere \$100,000 per year. Expert personnel were not available for supervision, having been lured to the contiguous states by job opportunities created by the war. Labor in general was scarce and living expenses high. Work proceeded on only a few projects, and much of the mileage constructed in the previous period went into disrepair or was reclaimed by the wilderness. The period closed in 1920 when the present Commission organized itself.¹⁴

The Period From 1920 To 1926

The third period, from 1920 to the close of the 1926 fiscal year, was characterized by increased appropriations, broader legislation, close cooperation with the Territory, the purchase of much mechanical equipment largely replacing horses, and heavier construction standards to withstand motor traffic. The Commission also reopened old trails and roads, and generally adjusted the transportation routes made necessary by the construction of the Alaska Railroad from Seward which had reached Fairbanks in 1925. Federal appropriations increased from \$350,000 to \$900,000 per annum, and together with other resources, brought the funds available for the 1925 work season to \$1,350,000.¹⁵

Commission Employee John Hajdukovich

While the Commission planned the overall program for each season, the personnel in the field performed the work. John Hajdukovich, an interior sourdough and trader, with his crew performed trailwork between McCarty and Tanana Crossing for the Commission on a contract basis. At the end of February 1924 he reported on his accomplishments in detail.¹⁶ From McCarty to Clearwater, a distance of about twelve miles, he had widened the trail, eliminating windfalls and cut three miles of new trail through heavy timber burned in a forest fire the previous year. His crew bridged the Middle Clearwater with a 110 foot long bridge, wide enough for horse-drawn double-enders. Hajdukovich wrote that his crew had built several smaller bridges, graded high banks and widened the trail where necessary, and removed the windfalls. In short, the trail between McCarty and Tanana Crossing once again was in fairly good shape.

Commercial Transportation On The Richardson Highway

J. L. Galen, the president of the Richardson Highway Transportation Company, early in the spring of 1924 lobbied Colonel Steese for "every dollar you can spare to the Richardson Highway," made necessary, indeed fully justified by the greatly increased travel he anticipated in the coming season. His company had every intention of substantially improving the transportation service over the Richardson Highway. Ten new Studebaker cars were to be put into service to handle all tourists in comfort, and if traffic volume justified, Galen was ready to purchase as many other automobiles as the market demanded. He proudly related that his company already owned nine Studebakers, three Dodge touring cars, two Cadillac passenger cars used for hauling baggage, and one freight truck. All equipment was first class and attractive, he assured Steese. Galen also considered erecting a tent camp at either Paxson's or Summit Lake because the stretch between Black Rapids and Meiers' Roadhouse would be too long should it become necessary to

divide a large tourist party and "yet take them through on a close schedule." In fact, the Richardson Highway had become an important traffic feeder both for the Alaska Railroad and the Copper River and Northwestern Railway. With these two rail systems it formed a circular route which had become widely known in the contiguous states as the "Golden Belt Line Tour," and hundreds of tourists made this very scenic trip each season without any delays or inconveniences. In the process Galen's company and others catering to the visitors had experienced a modest prosperity. Steese responded favorably to these entreaties, and the Alaska Road Commission spent about \$280,000 on the Richardson Highway during the 1924 season.¹⁷

Nenana - Tanana Winter Trail

Territorial residents perceived many transportation needs, and as Colonel Steese pointed out, "each town . . . wants all roads and trails brought to its front door regardless of other communities or of the general transportation situation." Many requests for local roads and trails the Commission had to turn down for lack of funds. In the spring of 1924, for example, the Chief Clerk of the Post Office Department at Nenana recommended that the Commission make extensive improvements to the Nenana - Tanana winter mail route, in effect making it a summer route as well. Steese refused to consider the proposal because, as he pointed out, whenever practicable, boats carried the mails in the summer and horse-drawn bobsleds or dogsleds in the winter. The Commission, as a matter of policy, did not spend any money constructing summer roads to parallel river routes. The Nenana - Tanana, or Dunbar - Fort Gibbon winter bobsled road, formerly known as the Fairbanks - Esther - Fort Gibbon winter bobsled road, was the main winter route into all of western and northwestern Alaska. The Commission had improved the trail to winter bobsled road standards many years ago and consistently maintained it. In view of the excellent boat service on the Tanana River, therefore, the Commission did not consider it justified to improve the winter bobsled road to permit the summer use of

wagons.¹⁸

The Yukon-Kuskokwim-Russian Mission Portage

In another section of Alaska, travelers made several requests that the Commission improve the Yukon-Kuskokwim-Russian Mission Portage, and in the fall of 1923 Walter W. Lukens, an assistant superintendent for the Commission, made an investigation of the site. In October 1923 he reported from Holy Cross recommending that \$1,000 be expended on the Russian Mission portage that same fall to clear out brush from the creeks. If this work was performed, Lukens thought that the mail delivery to the Kuskokwim on this route could be increased to two runs per month, and the weight limit raised to one thousand pounds, four hundred of these to Bethel and six hundred to McGrath. Lukens advised that the Commission also should spend some \$3,000 in the early spring and summer of 1924 to clear the small streams, sloughs, and lakes of "grassod" which had closed most of the shallow waterways completely, making it very difficult for travelers to navigate. He suggested that the Commission construct small dams at six of the creeks. These would impound the water, making it possible to build a skidway or slide on which boats and canoes could be drawn up and let down on the other side with a hand windlass and small steel cable.¹⁹

There were two land portages, one very low and the other quite high, each about one mile long. Lukens recommended that the Commission build a tram for each of the portages, equipped with light hand-pushed four-wheeled cars to haul the mails, freight and baggage and boats. Since the portage was so difficult in its present unimproved form, travel over it was fairly light. Once improvements had been made, however, Lukens expected travel between the two rivers to increase substantially. He therefore suggested the erection of three shelter cabins along the portage for summer travel, each to cost about \$350. Lukens recommended that the Paimute portage be staked with high beacons which would lessen the travel hardships over this route, that two shelter cabins be built, the creeks be cleared of brush and grass, and the two small lakes be

cleared along one shore to permit the passage of small boats.²⁰

Assistant Chief Engineer Ike P. Taylor Inspects Portage

Lack of money prevented the Commission from implementing most of Lukens recommendations. In the fall of 1929 Assistant Chief Engineer Ike P. Taylor inspected the Yukon-Kuskokwim Russian Mission Portage to report what had been accomplished and what work still needed to be done. He left Russian Mission over the portage on September 8 and arrived at the mouth of Mud Creek on the Kuskokwim River two days later, accompanying the mail carrier who traveled the route once every two weeks. Taylor carefully described the route. He left Russian Mission on a small gas boat some six miles down the Yukon River to the mouth of Tatlawuksuk Slough and up this slough about thirty miles to the first portage. The first portage was about one-half mile in length; on it was located a shelter cabin the Commission had constructed in 1926. Once across the portage, he used a row boat propelled by an outboard engine to cross a lake about one mile in length, then through a narrow channel some 300 feet long into a second small lake of the same length. At the end of the second lake it was necessary to portage about 3,000 feet to a large lake beyond. Taking another row boat with an outboard engine, he crossed the two mile long lake which ended in a winding one-mile long one-foot deep channel with a slight current, very crooked and partly filled with grass and water lilies. This channel entered yet another shallow two-mile long lake which ended in narrow, grassy channels connecting small lakes. Taylor observed that there were several alternate routes which all should be investigated and the best selected, then well-marked and improved by widening and straightening. Approximately four miles of this type of channel constituted the headwaters of Crooked Creek which he followed downstream for approximately 20 miles. Taylor left Crooked Creek at its junction with Johnson Creek, followed it up about eight miles and reached the next portage, about 3,000 feet long, which led to a small lake with a Commission shelter cabin. He crossed the lake by row boat and went over another

short portage to Mud Creek. This he followed downstream five miles to a deep water slough of the Kuskokwim River. Taylor found these last five miles as troublesome as any of the water portions of the route. The water was very shallow for the entire distance, and in some sections not over six inches deep. In addition, Mud Creek was very narrow in places and brush and snags obstructed progress. Taylor related that some years ago a brush and earth dam, some six feet high, had been built at the mouth to back up water allowing logs to be floated down. Travelers later removed part of the dam to allow the passage of boats. Taylor recommended that another similar dam be built at the same location, backing the water up to the portage. A stiff log derrick with a hand winch, he thought, could be used to elevate boats over it.²¹

Taylor then recommended the construction of two trams with steel rails placed on wooden ties together with the necessary appurtenances, and the straightening, cleaning, and where necessary, damming, of the water portions of the route. He did point out, however, that there was little traffic over the route beside the mail trip every two weeks each way. The mail amounted to about 4,000 pounds per season, and additionally, about forty individuals crossed the portage in the 1926 season.²²

Engineer Officer D. H. Gillette Inspects Portage

The next year D. H. Gillette, the engineer officer of the Commission and his assistant left for the Yukon-Kuskokwim-Russian Mission Portage. They arrived at Russian Mission on June 27, 1928 and left the settlement with the mail carrier the next day, arriving at Bethel on July 1. Gillette and his assistant took elevations with a hand level and made careful measurements with tape, in the process confirming Taylor's report of the previous fall and correcting it where necessary. Gillette drew up a list of recommended projects, consisting of two steel trams 2,500 and 4,000 feet long, respectively, costing a total of \$12,470, and water improvements, including the construction of a 3,000 long canal at

second portage, costing \$12,050 for a combined total of \$24,520. Gillette admitted that the traffic at present was slight, but he pointed out that improving the portage would entice many travelers to enter and leave the Kuskokwim by that route. As Gillette appraised the situation, local inhabitants were practically forced to use the portage in order to get out of the area since the airplane fares to Anchorage and Fairbanks cost a prohibitive \$500 and \$750, respectively. Furthermore, the river-boat Tupper arrived too late and left too early to benefit prospectors and trappers very much. In short, the benefits to be derived would be entirely commensurate with the costs of the improvements. Finally, Gillette suggested that the Commission and the territory split the construction costs evenly.²³

Donald MacDonald To Supervise Construction of Portage

Early in 1929, the Commission had decided to proceed with the work and instructed Donald MacDonald, an assistant superintendent, to familiarize himself with all the details of the project. The Commission was to furnish the steel rails, squared lumber and explosives needed to blast the canal on the second portage. The Commission intended to build the canal, but have the rest of the work performed by local contractors. Still, despite the detailed instructions and blueprints, Gillette admonished the foreman to use his good sense in building from the blueprints because field conditions might call for alterations. What the Commission wanted to accomplish, he stated, "is a route which will enable a stranger to start at one end and go through the whole portage in the same boat without unloading it, the only limitation being that boat and cargo should not weigh more than about two tons."²⁴ It was to take the 1930 construction season as well before the project was finished because territorial funds did not become available in time.

Kodiak Road Needs

The citizens of Kodiak wanted roads as well. In June 1924,

Willard T. Scott, the Deputy Marshal of Kodiak, visited Hawley W. Sterling, the superintendent of the Anchorage division of the Alaska Road Commission "for the purpose of boosting the road situation at Kodiak Island." Hawley suggested that Scott meet with those interested in road construction in Kodiak in order to arrive at a concensus as to how the small allotment available should be spent. In July, Sterling left for Kodiak with a crew of three men and a cook to investigate conditions himself. He met with some of the town's leading citizens, including Scott, Erskine, Kraft, Broadcobb and Abbett and discussed road needs with them. Each one presented a different view, Sterling ruefully reported, but all except one agreed that the money should be spent on a road from the town toward the cannery - although they could not agree on a location.²⁵

Sterling and his crew then examined the possible location of a road as far as Spangler's cut which the Commission had built in 1922. The cut had been of some value, allowing three homesteaders some five miles from town to reach it on a saddle horse. Put in as a temporary measure, it had cost \$3,000 including the survey. Unfortunately, none of the work on the cut could be used as a base for later road construction, for it forced travelers to traverse the beach over large broken rock and slippery boulders, and to go around a rock point which could only be negotiated at low tide. Sterling discussed the situation with Abbett, who used the route most often, and then decided to spend the little available money in putting in a horse trail on the side hill in a location which later could be widened into a road, avoiding the beach entirely.²⁶

Regretfully, no one of the interested parties, except Abbett, had offered any financial or labor assistance on the work unless the road went their way. In fact, Sterling reported, Erskine took the attitude that "we are entitled to it," and refused to apply anything to the project regardless of the route. This attitude riled Sterling, for if anyone was entitled to any assistance it was Abbett who owned a ranch five miles from town and had worked hard and conscientiously for twelve years to build a viable business. He had invested \$40,000 in his

place, possessed about 500 sheep, 70 head of cattle and 8 horses, but had steadily lost money on his enterprise until the last two years when he had barely broken even.²⁷

Hawley Sterling's Recommendations

Sterling recommended to Commission President Steese not to spend any funds at all on the 3,000 foot road from the town to the cannery, for he felt that city residents should have the initiative to construct this section from their own resources. Furthermore, he counseled that the Commission should not even get involved in the location of this road, because it only would entangle it in heated arguments over property rights. Let the locals settle these problems among themselves, Hawley advised, and then allot \$10,000 next season to start road construction from the cannery toward Abbert's ranch - but only if the town's people build the stretch to the cannery. Sterling concluded that "if they refuse to construct the road which lies within the town, I would not approve of spending five cents more at Kodiak until such time as they see the light and are willing to help themselves, to that extent."²⁸

Subcommittee of Kodiak Good Roads Club Petitions Commission

Early in 1925 a subcommittee of the Kodiak Good Roads Club petitioned the Commission to spend \$30,000 over the next three years on three projects. First, it wanted the Commission to take over the maintenance of that portion of the old Russian Mill Bay road, some 2.25 miles in length, which the community had kept open and maintained over more than fifty years at substantial expense. And while no maintenance expense figures were available prior to 1914, the community had spent over \$3,000 during the last five years alone. It was an important stretch of road because it served the United State Agricultural Experiment Station as well as many homesteads west of town. The Committee also asked that the Commission reopen the last 1.5 miles

of this road all the way to Mill Bay. Not only would this construction materially benefit the homesteaders, but there were valid historical and sentimental reasons for performing the work. The Russians had built this road, perhaps as early as 1798, in order to reach their grist mill on Mill Bay, operated by water flowing from the chain of lakes. The date of construction made it a historical road, "the oldest highway in the Territory of Alaska, and almost as old as the famous El Camino Real of the California Padres."²⁹

The subcommittee pointed out that Kodiak Island was most favorably located with regard to the great fishing banks of the North Pacific. This location promised a prosperous future, and Kodiak shortly was destined "to become the center of the largest deep sea fisheries of the Pacific ocean, meaning, most likely, the most important, as far as quantity of production is concerned, fishery in the world." The development of the fisheries naturally would create a higher demand for farm goods, such as meat and dairy products. It therefore was essential to build highways to the ranches so farmers could deliver their goods to town. The subcommittee reminded the Commission that its first road project on Kodiak had been designed to enable Abbert's ranch in the Buskin River Valley to market his meat and milk in town without having to depend upon the uncertain water route. When citizens first broached the subject with the Commission, they received assurances that this road to the Abbert ranch would be built. On the strength of that promise, Abbert had invested thousands of dollars in ranch improvements and several other homesteaders had located in the Buskin River Valley. Finally, the subcommittee was of the firm belief that every member of the Kodiak Good Roads Club, embracing virtually every resident of Kodiak and vicinity, would contribute in either cash or labor to help carry out this project. In fact, residents already had pledged \$295.00 in cash and 61 man-days of labor, including horse teams as well.³⁰

During the 1926 work season, the Commission spent \$13,754.29 in construction of the Kodiak-Abberts road and another \$500 in maintenance for a total of \$14,254.29.³¹ The petitioning had been successful.

The Iliamna Project

There were times when the Commission discovered that it had listed a stretch of wagon road erroneously in its annual report. This was the case with the Iliamna project, route 48, listed as ten miles of wagon road and two miles of trail. Superintendent Sterling inspected the site in 1924 and reported that no wagon road existed, nor had there ever been one. Prior to 1917 the Commission had performed no work in that district with the exception of a reconnaissance trip by John Zug. In 1917 the Commission had sent W. G. Fenton to start work on the so-called road. He spent \$5,000 and less than a week after he had left, a heavy rain made the first four miles impassable because the location had been too close to a stream. In 1921 the Commission sent H. W. Vance as foreman to the project. Vance changed the location of the first four miles, crossing a different summit to reach the creek flowing into the Iliamna River. Although Vance had avoided danger of flooding, the stretch getting up to the summit and then down from it was so steep as to be unsuitable for a wagon road, indeed, in some places not even a pack horse could carry a load.³²

Sterling observed that the trail served traders, settlers, prospectors and trappers in and around Iliamna village who transported part of their supplies over it. Villagers purchased most of their goods from canneries on Bristol Bay. They shipped their supplies up the Kvichak River, thence through Iliamna Lake and four miles up the Iliamna River. It cost \$20 to transport each ton over this route, entirely navigable for boats drawing three feet even in low water. Sterling suggested that the route from Bristol Bay would always be used for transporting bulk tonnage, depending on the availability of steamer service. Building a wagon road from Iliamna Bay would not change this transportation pattern, he thought, but since there was no regular, frequent and dependable service to Bristol Bay, and since the canneries could not always supply all needs, the Iliamna Bay outlet was vital to those living within the district. He estimated that there were 45 Caucasians and 150 Natives. Most of the residents trapped, a few pros-

pected, and most seemed content to remain in the area all of their lives. Sterling pointed out that the area was highly mineralized, containing gold, silver, copper, lead, zinc and oil. All that was needed to develop the country, he thought, was to encourage immigration by constructing a transportation route. He suggested that various government bureaus cooperate to make the trail a viable one. The Department of Commerce, for example, should improve the bay by marking the deepest channel with buoys or spars to make it safe for gasboats; while the Post Office Department should inaugurate a bimonthly service between May and October on specified days, insisting that the carrier deliver the mail to a cabin at the end of the trail so that it could be taken on by pack horse. This scheme would insure that residents could get in and out on a regular mail boat.³³

Ultimately a wagon road should be built, but before this happened the Commission should undertake several projects for helping the district, such as constructing a shelter cabin at the end of the new trail; carry the bay end of the trail to a point where it could be reached by gas boat in high or low tide; build bridges over the entire route; and put the trail on the west and east sides of the summit on wagon road grade.³⁴

Following Sterling's recommendations, the Commission expended \$5,770.00 in new construction and \$725 in maintenance on the Iliamna Bay - Iliamna Lake route for a total of \$6,495; and another \$5001.76 and \$1,540, for a total of \$6,541.76 in 1927.³⁵

What the foregoing examples show are that the Alaska Road Commission responded flexibly and intelligently to the territory's transportation needs. A highly competent staff stretched modest appropriations to best advantage. What nagged Commission personnel, however, was the fact that each new project completed subsequently required funds for maintenance. There would come a time, they feared, when all available funds would be required for maintaining existing wagon roads, trails, bridges, and tramways, among others. This would foreclose the construction of any new projects.

FOOTNOTES

1. Memorandum by C. H. Skinner, Chief Clerk, September 30, 1932, R. G. 126, Central Classified Files, 9-1-55, N.A.
2. Board of Road Commissioners for Alaska, Report Upon The Construction and Maintenance of Roads, Bridges, and Trails, Alaska in Annual Report of the Chief of Engineers, 1926, Extract (Washington: Government Printing Office, 1926), p. 1953. Hereafter cited as Annual Report of the Alaska Road Commission and Year.
3. Ibid.
4. Ibid., p. 1954.
5. Ibid., p. 1957.
6. Ibid.
7. Ibid.
8. Ibid., pp. 1957-1958.
9. Board of Road Commissioners For Alaska, Annual Report Of The Alaska Road Commission Fiscal Year 1926, Report Upon The Construction and Maintenance of Military and Post Roads, Bridges And Trails; And of Other Roads, Tramways, Ferries, Bridges, Trails, And Related Works In The Territory Of Alaska, Twenty-Second Annual Report, 1926, Part II, Operations (Juneau, Alaska: Alaska Daily Empire Print, 1926), pp. 10-11. Hereafter cited as Part II, Operations and year.
10. Ibid., pp. 12, 15-16.
11. Ibid., pp. 19-20.
12. Ibid., p. 20.
13. Ibid., p. 37.
14. Ibid.
15. Ibid., pp. 37-38.
16. Hajdukovich to Superintendent, ARC, Fairbanks, February 25, 1924, R.G. 30, A.R.C., Box 65480, Federal Records Center, Seattle, Washington.

17. Galen to Steese, April 20, 1924, R.G. 30, ARC, Box 65480, Federal Records Center, Seattle, Washington; Part II, Operations, 1924, pp. 49-50.
18. Steese to Territorial Board of Road Commissioners, April 29, 1924, R.G. 30, ARC, Box 65480, Federal Records Center, Seattle, Washington.
19. Lukens to Gotwals, February 9, 1924, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
20. Ibid.
21. Taylor to Gillette, October 21, 1927, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
22. Ibid.
23. Gillette to President of the Board, July 26, 1928, R.G. 30, Box 65637, Federal Records Center, Seattle, Washington.
24. Gillette to MacDonald, February 16, 1929, Gillette to Foreman, Yukon-Kuskokwim Portage, April 22, 1929, Gillette to Haselem, April 23, 1929, R.G. 30, ARC, Box 65637, Federal Records Center, Seattle, Washington.
25. Sterling to Steese, July 16, 1924, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
26. Ibid.
27. Ibid.
28. Ibid.
29. Subcommittee of the Kodiak Good Roads' Club to Lunsford, February 9, 1925, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
30. Ibid.
31. Part II, Operations, 1926, p. 97.
32. Sterling to Lunsford, September 2, 1924, R.G. 30, ARC, Box 65479, Federal Records Center, Seattle, Washington.
33. Ibid.
34. Ibid.
35. Part II, Operations, 1927, 1928, pp. 95, 85.

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
79	Seward Warehouse	\$	\$ 16.00	\$ 16.00
80	Minchumina Portage Recon....	500.00	.....	500.00
80A	McGrath-Tokotna (Summer) ...	.....	60.20	60.20
80AA	McGrath-Tokotna (Winter) ...	.....	831.42	831.42
80B	McGrath-Telida .....	.....	408.90	408.90
80E	Tokotna-Twin Peaks	113.16	.....	113.16
80G	Tokotna-Nixon Fork (Summer).	.....	160.56	160.56
80GG	Tokotna-Nixon Fork (Winter).	.....	108.16	108.16
81	Good Creek-Salmon River.....	1,493.00	300.00	1,793.32
86	Fourth of July Creek	600.00	440.39	1,040.39
88	Ferry-Eva Creek	10,155.79	1,400.00	11,555.79
89A	Seward Peninsula Railroad, 1st Sec.	7,649.25	4,200.00	11,849.25
89A	Seward Peninsula Railroad, 2nd Sec. ....	.....	13,200.00	13,200.00
90B	Shelter Cabins, 2nd Division	1,754.55	917.53	2,672.08
90C	Shelter Cabins, 3rd Division	2,852.73	417.30	3,270.03
90D	Shelter Cabins, 4th Division	3,340.60	432.70	3,773.30
92A	Bethel-Quinhagak .....	.....	112.60	112.60
92B	Bethel-Akiak	300.00	222.77	522.77
92L	Crooked Creek-Anlak .....	.....	277.42	277.42
92M	Aniak-Tuluksak .....	.....	25.00	25.00
92N	Akiak-Canyon Creek .....	.....	306.00	306.00
92O	Tuluksak-Bear Creek	1,185.12	.....	1,185.12
92P	Holy Cross-Kaltshak	500.00	.....	500.00
93	Chulitna Trail .....	.....	116.29	116.29
93A	Bull River Trail	1,183.51	200.00	1,383.51
93B	Indian River Footbridge ....	.....	4.00	4.00
94	Kodiak-Abberts	13,754.29	500.00	14,254.29
95	Kanatak-Becharof Lake .....	.....	50.75	50.75
96	Chickaloon-King River .....	.....	413.66	413.66
98	Homer Project	7,382.57	.....	7,382.57
98A	Nuka Bay	4,302.66	.....	4,302.66
100	Juneau Office and General Overhead.....	12,217.29	22,100.00	34,317.29
Totals		\$828,045.38	\$483,272.31	\$1,311,317.69

Source: Part II, Operations, 1926, pp. 34, 93-96,

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
47A	Wiseman Aviation Field.....	\$ 2,000.00	\$	\$ 2,000.00
48	Iliamna Bay-Iliamna Lake...	5,770.00	725.00	6,495.00
49	Davidson's Landing-Taylor..	.....	2,616.84	2,616.84
51	Talkeetna-Cache Creek	2,000.00	8,229.12	10,229.12
51A	Cache Creek Trail	1,270.00	706.28	1,976.28
51B	Peters Creek Trail	3,807.93	620.00	4,427.93
51C	Upper Yentna	1,114.91	.....	1,114.91
53	Eagle-Circle	742.00	941.78	1,683.78
53A	Circle-Fort Yukon .....	.....	1,219.65	1,219.65
53B	Fort Yukon Aviation Field..	1,190.89	.....	1,190.89
54	Chisana-Nizina	770.19	.....	770.19
55	Kenai-Russian River	1,200.00	1,908.87	3,108.87
57	McCarthy-Nizina	9,291.88	6,290.00	15,581.88
57A	Nizina river Bridge	3,000.00	3,876.35	6,876.35
59	Fairbanks Bridge .....	.....	13.85	13.85
59A	Fairbanks Depot	3,403.09	.....	3,043.09
61	Strelna-Kuskhana .....	.....	1,321.44	1,321.44
62	Dime Creek .....	.....	2.50	2.50
63	Dunbar-Brooks	2,500.00	1,706.02	4,206.02
63B	Brooks-Amy Creek .....	.....	277.10	277.10
63C	Brooks Tram .....	.....	4,190.59	4,190.59
63E	Livengood Aviation Field...	294.00	.....	294.00
64AA	Cripple-Cripple Mountain...	611.05	.....	611.05
65A	Gulkana-Chistochina, 1st Sec.....	13,500.00	2,185.00	15,685.00
65A	Gulkana-Chistochina, 2nd Sec.....	5,600.00	.....	5,600.00
65D	Ketchumstuk-Tanana Crossing	.....	807.00	807.00
65E	Chicken-Ketchumstuk .....	.....	144.50	144.50
65F	Grundler-Tanana Crossing...	602.26	.....	602.26
65G	Slana-Chisana Reconnaiss- sance	385.04	.....	385.04
67	Nome-Teller .....	.....	697.90	697.90
68	Flagging Trails .....	.....	4,043.04	4,043.40
73C	Old Hamilton-Scammon Bay ..	1,100.00	.....	1,100.00
75	Anchorage-Eagle River	4,973.60	5,800.00	10,773.60
75B	Anchorage-Whitney	3,627.47	1,500.00	5,127.47
75D	Anchorage Warehouse .....	.....	427.98	427.98
75E	McDonald Road	605.13	150.00	755.13
76	Cantwell-Valdez Creek .....	.....	21.00	21.00

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
33F	Flat City-Otter Discovery..	\$	\$ 480.60	\$ 480.60
33H	Flat Aviation Field	1,200.00	.....	1,200.00
34B	Iditarod-Shageluk.....	500.00	.....	500.00
35A	Archange Extension	1,200.00	1,767.42	2,967.42
35AA	Sherry Branch	1,119.32	.....	1,119.32
35AB	Fairangel Extension	104.20	.....	104.20
35D	Willow Creek Extension ....	.....	2,865.60	2,865.60
35E	Wasilla-Fishhook .....	.....	4,284.58	4,284.58
35F	Wasilla-Knik	2,610.00	2,055.62	4,665.62
35H	Wasilla-Finger Lake- Palmer.....	.....	220.30	220.30
35J	Wasilla-Matanuska	3,520.00	2,317.62	5,837.62
35K	Matanuska Trunk Road .....	.....	391.50	391.50
35N	Houston-Willow Creek .....	.....	249.00	249.00
36	Mineral Creek	6,817.01	3,341.00	10,158.01
36A	Granby Road .....	.....	349.44	349.44
38A	Ruby-Long .....	.....	4,183.79	4,183.79
38C	Ophir-Cripple .....	.....	475.79	475.79
38D	Ophir-Tokotna, 1st Sec. ...	10,240.00	2,340.00	12,580.00
38D	Ophir-Tokotna, 2nd Sec. ...	12,768.16	3,210.00	15,978.16
38E	Long-Poorman (Summer)	11,725.88	2,200.00	13,925.88
38F	Poorman-Ophir .....	.....	702.59	702.59
38H	Ganes Creek Road	2,158.85	3,000.00	5,158.85
38K	Ruby Aviation Field	600.00	.....	600.00
40	Douglas-Gastineau Channel..	2,102.16	800.00	2,902.16
41B	Kotzebue-Point Barrow	1,900.00	.....	1,900.00
44A	Skagway-Smuggler's Cove ...	.....	558.80	558.80
46	Kobi-Eureka .....	.....	659.75	659.75
46D	McKinley Park Road, 1st Sec.....	15,230.00	49.16	15,279.16
46D	McKinley Park Road, 2nd Sec.....	18,200.00	.....	18,200.00
46D	McKinley Park Road, 3rd Sec.....	19,060.24	.....	19,060.24
46E	Diamond-Telida .....	.....	968.89	968.89
46F	Nenana Cemetery .....	.....	619.20	619.20
46G	Kobi-Bonfield .....	.....	60.90	60.90
46H	Lake Minchumina Aviation Field.....	750.00	.....	750.00
47	Coldfoot-Wiseman .....	.....	657.24	657.24

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
16	Chatanika-Miller House, 7th Sec.	\$ 19,975.00	\$	\$ 19,975.00
16	Chatanika-Miller House, 8th Sec.	19,703.48	.....	19,703.48
17	Fort Gibbon-Kaltag .....	.....	514.00	514.00
18	Kaltag-Nome	2,000.00	969.88	2,969.88
18A	Bonana-Kotzebue .....	.....	234.78	234.78
20DA	Tokotna-Ophir .....	.....	396.43	396.43
21	Unalakleet-St. Michael ....	.....	162.28	162.28
22	Hot Springs-Sullivan Creek.	.....	3,075.95	3,075.95
23A	Snowshoe-Beaver .....	.....	916.81	916.81
23B	Beaver-Caro	5,250.00	9,220.10	14,470.10
23C	Big Creek	1,060.00	907.57	1,967.57
23D	Caro-Flat Creek .....	.....	529.32	529.32
25D	Mouth of Center Creek .....	.....	122.15	122.15
25E	Submarine Paystreak .....	.....	359.39	359.39
25F	Anvil-Glacier	1,489.41	900.00	2,389.41
25G	Snake River Extension .....	.....	963.53	963.59
25L	Nome Aviation Field	2,500.00	.....	2,500.00
25M	Seward Peninsula Telephone Lines .....	.....	2,149.10	2,149.10
26	Candle-Candle Creek .....	.....	1,020.69	1,020.69
27	Deering-Immachuk	1,500.00	3,995.06	5,495.06
28A	Nome-Taylor .....	.....	455.68	455.68
29	Fort Gibbon-Bettles .....	.....	780.75	780.75
29A	Bettles-Coldfoot .....	.....	130.75	130.75
30	Hot Springs Landing-Eureka.	1,500.00	5,473.77	6,973.77
30A	Hot Springs-Tofty	600.00	658.47	1,258.47
31	Caribou Creek .....	.....	125.71	125.71
32A	Tokotna-Flat (Summer) .....	.....	463.33	463.33
32AC	Candle Creek-Tokotna .....	.....	74.89	74.89
32B	Iditarod-Flat	3,858.20	2,400.00	6,258.20
32C	Ophir-Iditarod (Winter) ...	.....	225.88	225.88
32D	Flat-Crooked Creek (Winter)	500.00	1,107.60	1,607.60
32E	Tokotna Aviation Field	1,691.19	.....	1,691.19
32F	Tokotna Depot	1,650.26	300.00	1,950.26
33C	Flat City-Flat Creek .....	.....	623.80	623.80
33D	Head Flat Creek-Willow Creek .....	.....	730.95	730.95

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
7V	Fairbanks-Wireless Road	\$	\$ 15.00	\$ 15.00
8	Nome-Council, 1st Sec.	2,000.00	14,050.00	
8	Nome-Council, 2nd Sec.	6,402.43	2,150.00	8,552.43
8H	Casa de Paga .....	.....	727.52	727.52
11A	Eagle-Liberty .....	.....	1,835.80	1,835.80
11AA	American Summit-King Solomon	5,429.14	1,000.00	6,429.14
11B	Liberty-Fortymile .....	.....	171.50	171.50
11C	Steel Creek-Jack Wade .....	.....	325.25	325.25
11CC	Steel Creek-Jack Wade (Summer) .....	.....	162.50	162.50
11D	Steel Creek-Walker's Fork ..	.....	308.20	308.20
11E	Eagle-Seventymile	10.00	1,301.80	2,211.80
11F	Jack Wade-Chicken .....	.....	814.20	814.20
11G	Steel Creek-Canyon Creek ...	.....	92.00	92.00
11H	Liberty Cabin-Dome .....	.....	77.15	77.15
11I	Dome-Steel Creek	500.00	1,485.49	1,985.49
11L	Franklin-Chicken Creek .....	.....	156.50	156.50
11M	Jack Wade-Walker's Fork (Summer) .....	.....	125.00	125.00
11MM	Jack Wade-Mouth of Walker's Fork .....	.....	114.50	114.50
13A	Nome-Bessie	4,931.90	1,400.00	6,331.90
13B	Bessie-Banner .....	.....	738.91	738.91
13C	Bessie-Little Creek	500.00	1,041.82	1,541.82
13F	Nome-Osborne .....	.....	141.42	141.42
13K	Bessie-Buster	3,121.95	1,500.00	4,621.95
14A	Sitka National Monument	300.00	1,272.65	1,572.65
14B	Sitka National Cemetary	150.00	631.82	781.82
15	Circle-Miller House .....	.....	3,135.91	3,135.91
16	Chatanika-Miller House, 1st Sec.	8,210.00	10,130.00	18,340.00
16	Chatanika-Miller House, 2nd Sec.	16,127.00	3,000.00	19,127.00
16	Chatanika-Miller House, 3rd Sec.	17,800.00	2,009.00	19,809.00
16	Chatanika-Miller House, 4th Sec.	19,725.00	.....	19,725.00
16	Chatanika-Miller House, 5th Sec.	19,910.00	.....	19,910.00
16	Chatanika-Miller House, 6th Sec.	19,850.00	.....	19,850.00

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
4G	Mile 168-Delta River, 2nd Sec.	\$ 5,711.00	\$ 9,400.00	\$ 15,111.00
4H1	Delta River-Rapids, 1st Sec.	7,250.00	9,100.00	16,350.00
4H1	Delta River-Rapids, 2nd Sec.	9,300.00	8,200.00	17,500.00
4H1	Delta River-Rapids, 3rd Sec.	8,020.00	9,020.00	17,121.57
4H2	Rapids-Grundler, 1st Sec. .	9,210.00	10,150.00	19,360.00
4H2	Rapids-Grundler, 2nd Sec. .	10,307.69	9,050.00	19,357.69
4I	Grundler-Richardson, 1st Sec.	8,500.00	4,200.00	12,700.00
4I	Grundler-Richardson, 2nd Sec.	6,690.00	5,720.00	12,410.00
4J	Richardson-Salchaket, 1st Sec.	10,500.00	6,420.00	15,920.00
4J	Richardson-Salchaket, 2nd Sec.	8,180.00	7,600.00	15,780.00
4J	Richardson-Salchaket, 3rd Sec.	10,402.64	5,190.00	15,592.64
4K	Salchaket-Fairbanks, 1st Sec. ....	.....	9,210.00	9,210.00
4K	Salchaket-Fairbanks, 2nd Sec.	15,077.92	4,020.00	19,097.92
4KA	Salcha Bridge	12,207.89	2,725.00	14,932.89
5A	Dunbar-Fort Gibbon .....	.....	1,440.48	1,440.48
6A	Willow Creek-Tonsina, 1st Sec.	7,600.00	3,275.00	10,875.00
6A	Willow Creek-Tonsina, 2nd Sec.	8,035.85	2,475.00	10,510.85
6B	Tonsina-Chitina	5,220.08	7,220.00	12,440.08
6D	Chitina Depot	3,380.78	750.00	4,130.78
7A	Summit-Chatanika	8,354.40	4,500.00	12,854.40
7D	Ester Creek	920.00	2,279.01	3,199.01
7G	Fairbanks-Gilmore, 1st Sec.	13,427.00	3,800.00	17,227.00
7G	Fairbanks-Gilmore, 2nd Sec.	14,503.87	2,700.00	17,203.87
7I	Gilmore-Summit	4,514.38	3,100.00	7,614.38
7J	Fairbanks-Chena Hot Springs.	500.00	1,203.06	1,703.06

EXPENDITURES IN DETAIL FOR FISCAL YEAR 1926

Federal Appropriations, Alaska Fund and Funds Contributed
by the Territory of Alaska and Others

Acct. No.	Name of Route	Construction	Maintenance	Totals
3A	Haines-Wells	\$ 2,060.00	\$ 6,025.14	\$ 8,085.14
3B	Pleasant Camp Extension, 1st Sec.	13,050.00	5,120.00	18,170.00
3B	Pleasant Camp Extension, 2nd Sec.	15,500.00	.....	15,500.00
3B	Pleasant Camp Extension, 3rd Sec.	7,511.69	.....	7,511.69
3C	Porcupine Extension .....	.....	25.00	25.00
3D	Haines-Mud Bay .....	.....	261.75	261.75
3E	Haines-Chilkoot .....	.....	64.50	64.50
4BA	Valdez-Ptarmigan Drop, 1st Sec.	9,700.00	9,200.00	18,900.00
4BA	Valdez-Ptarmigan Drop, 2nd Sec.	11,200.00	8,000.00	19,200.00
4BA	Valdez-Ptarmigan Drop, 3rd Sec.	10,625.00	7,300.00	17,925.00
4BA	Valdez-Ptarmigan Drop, 4th Sec.	14,070.00	5,060.00	19,130.00
4BA	Valdez-Ptarmigan Drop, 5th Sec.	15,130.68	3,000.00	18,130.68
4BB	Ptarmigan Drop-Ernestine, 1st Sec.	8,030.00	8,030.00	16,330.00
4BB	Ptarmigan Drop-Ernestine, 2nd Sec.	9,520.00	10,100.00	19,620.00
4BB	Ptarmigan Drop-Ernestine, 3rd Sec.	7,227.69	10,042.00	17,269.69
4C	Ernestine-Willow Creek, 1st Sec.	10,130.00	8,520.00	18,650.00
4C	Ernestine-Willow Creek, 2nd Sec.	12,130.31	6,205.00	18,335.31
4D	Willow Creek-Gulkana, 1st Sec.	12,200.00	6,300.00	18,500.00
4D	Willow Creek-Gulkana, 2nd Sec.	14,204.39	4,900.00	19,104.39
4D	Willow Creek-Gulkana, 3rd Sec.	13,100.00	4,000.00	17,100.00
4E	Gulkana-Sourdough	500.00	7,816.20	8,316.20
4F	Sourdough-Mile 168	8,754.59	5,400.00	14,154.59
4G	Mile 168-Delta River, 1st Sec.	6,000.00	9,800.00	15,800.00

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Sleds	Pack Horses	Tonnage
Flat City-Flat Creek	33C	Flat	Jan.-Dec.	600	100	40	100	20	175
Flat Creek-Willow Creek	33D	Willow Creek	Jan.-Dec.	300	90	30	50	15	125
Flat City-Otter Discovery ..	33F	Flat	Jan.-Dec.	600	40	100	40	70	325
Ophir-Tokotna	38D	Ganes Creek	June-Sept.	267	89	36	----	54	70
Poorman-Ophir	38F	Ophir	May-Oct.	30	----	----	----	6	----
Ganes Creek Road	38H	Ganes Creek	June-Sept.	473	154	182	----	25	241
Cripple-Cripple Mt.....	64A	Cripple	Jan.-Dec.	80	----	----	40	----	3
McGrath-Tokotna	80AA	McGrath	Nov.-Dec.	528	----	----	373	----	20
McGrath-Candle Creek	80C	McGrath	May-Nov.	60	----	----	----	----	----
Tokotna-Twin Peaks	80E	Tokotna	May-Oct.	25	----	----	----	8	1/2
Medfra-Nixon Mine	80F	Medfra	June-Oct.	80	----	20	----	----	8
Tokotna-Nixon Fork	80G	Tokotna	May-Oct.	30	----	----	----	----	----
NOME									
Nome-Council	8	Safety	June-Oct.	260	75	49	----	----	29
Nome-Teller	67	Sinrock	Jan.-Dec.	380	----	----	156	----	17

Source: Part II, Operations, 1926, pp. 34-35

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Steds	Pack Horses	Tonnage
NENANA									
Rampart-Eureka	9	Rampart	June	49	----	1	----	----	1
Kobi-Diamond	46	Kobi	Jan.-Apr.	75	----	----	65	----	12
Nenana-McGrath	----	Knight's R. H... ..	Jan.-Dec.	390	----	----	275	----	30
Ruby-Poorman	38A&E	Long	Jan.-Dec.	610	58	48	239	----	155
Ferry-Eva Creek	88	Ferry	May-Dec.	265	----	46	25	----	21
SOUTHWESTERN									
219 Archangel Extension	35A	Fishhook	Jan.	57	----	----	36	----	30
Wasilla-Fishhook	35E	Wasilla	Jan.-Dec.	3646	937	46	215	----	1112
Wasilla-Knik	35F	Wasilla	Jan.-Dec.	2591	258	156	98	78	140
Wasilla-Palmer	35H								
and Wasilla-Matanuska ..	35J	Wasilla	Jan.-Dec.	4249	394	359	181	53	259
McKinley Park Road	46D	McKinley	Jan.-Apr.	207	----	----	175	----	411
Iliamna Bay-Iliamna	48	Iliamna	Mar.-Oct.	242	----	----	71	120	13
Talkeetna-Cache Creek	51	Moose Creek	Jan.-May	409	----	----	193	----	201
Kenai-Russian River	55	Cooper's Landing	Jan.-Dec.	674	----	----	113	----	23
Anchorage-Eagle River	75	6 Mile R.H.....	Jan.-Nov.	7509	3213	2	43	----	100
Anchorage-Lake Separd	75A	Spenard	Jan.-June	931	245	----	37	----	518
Cantwell-Valdez Creek	76	Cantwell	Jan.	40	----	----	19	----	2
Kanatak-Becharof Lake	94	Kanatak	Jan.-Apr.	338	27	9	88	60	72
KUSKOKWIM									
Tokotna-Flat	32A	Tokotna	May-Nov.	96	----	----	----	36	3
Flat-Moose Creek	32AB	Flat	May-Nov.	44	----	----	----	24	2
Candle Creek-Tokotna	32AC	Tokotna	May-Oct.	64	----	----	----	----	----
Iditarod-Flat	32B	Flat	Jan.-Dec.	700	120	200	300	30	799

TRAFFIC CENSUS FOR FISCAL YEAR 1926

District	No. Route	Station	Period 1925	No. of Persons	Autos	Wagons	Sleds	Pack Horses	Tonnage
HAINES									
Haines-Pleasant Camp	3A&B	Wells	May-Dec.	7691	2191	23	148	----	297
EAGLE									
Eagle-Liberty	11A	Eagle	June-Dec.	1190	----	78	436	381	281
Eagle-Seventymile	11E	Eagle	Oct.-Dec.	225	----	----	105	25	87
Jack Wade-Chicken	11F	Jack Wade	June-Nov.	232	----	----	----	237	10
Steel Creek-Walker's Fork .	11D&G	Steel Creek	June-Sept.	155	----	----	----	158	7
Franklin-Chicken	11L	Franklin	June-Dec.	517	----	----	29	215	73
Eagle-Circle	53	Eagle	Nov.-Dec.	56	----	----	28	----	6
Chicken-Tanana Crossing ...	65D&E	Chicken	June-Sept.	261	----	----	----	86	5
CHITINA									
Chitina-Valdez-Fairbanks ..	----	Chitina	Jan.-Dec.	2097	982	72	479	6	1274
FAIRBANKS									
Fairbanks-Chitina-Valdez ..	----	Richardson	May-Nov.	3111	1171	67	----	----	430
Fairbanks-Chitina-Valdez ..	----	Grundler Ferry .	May-Oct.	2149	854	4	----	----	246
Gilmore-Fairbanks Creek ...	7C	Meehan	May-June	375	97	32	26	----	157
Gilmore-Fairbanks Creek ...	7C	Meehan	Oct.-Dec.	108	4	----	43	----	72
Fairbanks-Chena Hot Springs	7J	Colorado R. H... .	Jan.-Dec.	310	----	----	155	----	131
Chatanika-Circle	15&16	Miller House ...	Jan.-Nov.	1123	----	136	315	5	139
Chatanika-Circle	15&16	12 Mile R.H	Jan.-Apr.	174	----	----	198	----	40
Beaver-Caro	23B	Beaver	May-Dec.	75	----	2	27	10	27
Circle-Ft. Yukon	53A	Ft. Yukon	Jan.-Apr.	150	----	----	58	----	14
Grundler-Tanana Crossing ..	65F	Grundler	Jan.-Apr.	108	----	----	66	----	14

CHAPTER EIGHT

HIGH HOPES AND DISAPPOINTMENTS

Alaskans always demanded more transportation facilities than the Alaska Road Commission could construct because of the fiscal constraints Congress imposed. It did not matter in what isolated sections of the Territory its residents worked and played. Invariably, they always demanded that their mails be delivered and they be afforded access to supply sources, such as rivers and ports. Alaskans also were incurable hoosters who bragged about the natural resources, scenic attractions, and climatic advantages of their particular region.

Citizens of Nome Think Highly of Their Region

The citizens of Nome, on the sparsely settled, treeless and windswept Seward Peninsula, thought much of their region. At the end of 1927, the Northwestern Alaska Chamber of Commerce issued an appeal to the federal government to extend the Nome-Shelton Tramway to Candle and to construct adequate harbor facilities at Nome. The appeal, handsomely printed by the Nome Nugget, the town's newspaper, featured a map of the Seward Peninsula on the cover. Noted on it were the region's resources, such as numerous reindeer herds, gold, coal, and tin fields, and a hot springs location. Lines radiating out from Nome harbor into the ocean marked water transportation routes: to Barrow and the Arctic Ocean, to St. Michael and the Yukon River, to Seattle and San Francisco, to Japan and China, and to Anadyr, Siberia.¹

Want Federal Aid

The chamber explained that the citizens of Nome needed federal aid in order to "open up a highly mineralized region to the northward rich almost beyond imagination of man...giving access to a region in comparison with which all other mining fields in Alaska pale." Nome was the

logical and only supply base, for its port had at least two more months of open navigation than any other port on the Seward Peninsula, allowing ships to arrive and depart from the middle of May until the beginning of November. With the suggested improvements, Nome would serve the mining districts on the Kougarok, Inmachuk, Kugruk, and Keewalik Rivers.²

Rehabilitation Work Applauded

The Chamber applauded the rehabilitation work on the Nome-Shelton tramway, a distance of 86 miles, which the Commission had undertaken during the last three years. As a result of the work freight rates had fallen from 10¢ to 1¢ a pound. Extending the tramway to Taylor, about 40 miles from Shelton, would effect a similar savings. Beyond Taylor, unfortunately, mining activities had almost ceased because of excessive freight costs. If the federal government financed the proposed extension, the Chamber argued, "a vast field of quartz, as well as placer values, would be opened up to the nation's wealth and advantage." In addition, "great wealth would also be tapped in the fur industry and the reindeer industry."³

Nome Harbor

Nome needed a decent harbor, because its geographical position made it the "metropolis of the north and the only distributing point for the coast of Alaska from the Kuskokwim to Herschel Island on the American side of the Arctic Ocean, a distance of over 2,000 miles, and the logical port from which to supply settlements on the Siberian coast, the Chamber pointed out. Indeed, "all roads lead to Nome," and with a little government help Nome would become a great seaport and harbor, serving the needs of "the vast treasure house of the Northern section almost at our door. . . ."⁴

Minerals were only a part of the region's wealth, because the Chamber expected that the Bering Sea shortly was to become "the nation's greatest fish reserve." It abounded in halibut, cod, shrimp, crabs, and many

varieties of salmon, as well as herring. These riches of the sea strengthened the argument that Nome needed a large modern harbor and transportation facilities in order to dock and shelter the fishing fleet. Indeed, the Chamber expected that within a few years, Nome would "be the Ketchikan of Northwestern Alaska."⁵

Reindeer Industry

The Chamber also believed that there was a great future for the reindeer industry. A government biologist, Dr. E. W. Nelson, a few years earlier had estimated that Alaska could support between four to five million reindeer. About a million and a quarter could be slaughtered each year. A reindeer carcass, dressed for the market, averaged about 150 pounds. Taking this weight and the value of the meat, Nelson had estimated that a fully developed industry should yield approximately \$43 million per annum. The Chamber conservatively estimated one million carcasses per year, and at 150 pounds each, that would necessitate shipping out 150 million pounds of meat. It was not only the meat which was valuable, of course, since markets also had developed for reindeer by-products. Hides yielded leather, bone could be ground and shipped, horns utilized in manufacturing, and the hoofs made excellent glue stock. Waste fat found use in soap making, and the entrails and blood could be manufactured into fertilizer or dog and fox feed.⁶

Vast Coal Deposits

Last, but not least, were the coal deposits in the Kugruk River valley which would give a great impetus to prospecting. At present, the Seward Peninsula imported coal from British Columbia which cost from \$28.50 to \$35.00 per ton. The Kugruk coal could easily be landed in Nome for \$12.00 to \$15.00 per ton, a substantial savings. In view of all of the foregoing prospects, the Chamber asked Congress to appropriate \$750,000 for extending the Nome-Shelton tramway to Candle and building an adequate harbor at Nome, and providing docking facilities for ships of eight feet

draft or more "in order that the region described herein may be developed and redound to the Nation's wealth and strength."⁷

Congressional Parsimony

Congress, in its blindness, did not appropriate the requested funds. Instead the Commission continued to spend funds for construction and maintenance for a wide variety of projects. In fiscal year 1929, for example, it allotted a total of \$113,406 for projects in the second judicial division, a far cry from the \$750,000 requested by the North-western Alaska Chamber of Commerce for only two construction proposals.⁸

Road From Haines to Chilkoot

At times, the Commission could not help at all with funds. This was the case with a three-mile road from Haines to Chilkoot. In the summer of 1926, Joseph W. Stansfield, a homesteader and proprietor of Chilkoot Fur Farms who raised mink, blue foxes and chinchillas, asked Colonel Steese if the Commission could start work on a road to connect Chilkoot with Haines, a distance of about three miles. Regrettably, the Commission had to inform Stansfield that there was no possibility of starting the project in 1926, and in fact, there appeared to be "no possibility that it will be started within the next several years." Territorial officials, who would have put up the money for the road, had told the Commission that there was much desirable homestead land adjoining the existing good roads in the vicinity of Haines, and "that they cannot afford to build expensive roads such as this to any locality far from the existing roads where one may take out a homestead."⁹

Fur Farmer Stansfield Disappointed

Stansfield was taken aback by the attitude of the Territorial Board and the Commission. He insisted on presenting his side of the question. He agreed that Haines and vicinity had good roads and that there was

excellent homestead land nearby, yet this did not mean that there was an abundance of suitable sites for homesteads near Haines. On the Haines-Pleasant camp road, claimants had taken up the land for seven miles, and there was no good land beyond that for several miles. There was no available land along the Mud Bay road. Stansfield argued that it was very much of an uphill struggle to establish a homestead in Alaska. Since the local market was so small, homesteaders with products to sell needed to be as near as possible to a steamship dock in order to be successful. Stansfield complained that too many homesteaders had given up the struggle. Building a short road would give a group of homesteaders a fair chance to succeed. He even offered to have the group of settlers participate financially, in a modest fashion, in the project. This, he had heard, had been done in other parts of the Territory. Still, the Commission could promise no road work, but Stansfield's neighbors started to add their voices to the growing demand for a road. In the fall of 1926, Ruby E. Allen, the fur farmer's neighbor, told the Alaska Road Commission that "I have staked me a homestead and built a cabin north of Haines on Chilcoot Inlet, I would greatly appreciate it if you would do all in your power to see that we have a road along the beach in the near future." Steese assured Allen, as he had Stansfield, that the Territorial Board and the Commission would consider the request when next year's program came under discussion, but he could offer "no encouragement whatever as to the inauguration of this project." Steese had examined the stretch of proposed road and concluded that the costs were "all out of proportion to the possible benefits."¹⁰

Homesteaders Press Claims For Road

In the spring of 1927, Stansfield and Allen had interested numerous other citizens of the Haines region in their plight. Some eighty residents signed a petition directed to the Commission and the Territorial Board asking that the road from Haines to Chilcoot be built as soon as possible. The petitioners pointed out that the requested road would provide "an outlet for a very fertile farming district," a typically Alaskan exaggeration.

tion. Steese once again promised that the Commission and the Territorial Board would consider the proposal but could not be more specific. Stansfield was grateful that the Commission had at least acknowledged the petition. He pointed out that despite the lack of access, improvements and development on various homesteads had been progressing for the last four years, "and a good deal of building will be done there this summer, road or no road." But it was difficult. His neighbor, for example, had been waiting for ten days with a crew of four men to transport supplies and materials to his site but the weather had been too bad to make the trip.¹¹

What did Stansfield expect during the breakup seasons when travel throughout the territory was difficult, Steese asked. Even the road out of Juneau, he reminded Stansfield, was "still blocked by deep snow and neither the Bureau of Public Roads nor ourselves have ever pretended to maintain traffic at this season of the year." But Steese apparently was more optimistic, because he told Stansfield that an engineer officer would come to Haines in early May to inspect the entire situation "and line up a program for next year."¹²

Major Lunsford E. Oliver, the engineer officer, visited Haines and estimated that the short road would cost between \$10,000 to \$12,000, far more than the Commission or the Territorial Board were willing to spend because it would benefit relatively few people. Such an amount of money could be spent more effectively elsewhere serving a much larger constituency. Stansfield was disappointed, and he and his neighbors now asked for the construction of a packhorse trail along the beach from Haines to Chilkoot. Those benefited, he promised, would contribute fifty dollars in labor or cash to get the project underway. But despite repeated pleas by the homesteaders, neither the Commission nor the Territorial Board appropriated any funds.¹³

Gillette Makes Preliminary Survey

In the late fall of 1928, Engineer Officer D. H. Gillette walked over the proposed route. A road of sorts existed, he explained, and the

homesteaders apparently had done much work on it lately. But it had a slope of thirty-three percent of the north side, and for about a mile extensive clearing and boulder blasting would be necessary to put it into shape. He estimated the cost of the road at about \$11,500; it would serve three homesteading families raising vegetables and furs. These three shipped out about twenty tons of goods a year, and brought in the same amount, at an average cost of approximately \$12 per ton. This rate could easily be reduced to \$2 per ton with the road in place. Gillette thought that an additional fifteen to twenty homesteaders could locate between the hill and the cannery, and related that the construction of the road "would actually lead to more families coming in as they all seem to be doing very well, with their furs especially." In conclusion, he pointed out that the residents of Haines supported the proposal wholeheartedly, undoubtedly because all would indirectly benefit from increased business in the vicinity. In the 1929 season, the Territorial Board finally appropriated funds for the road from Haines to Chilkoot, and the Commission built it. The tenacity of the residents finally had paid off.¹⁴

Situation In 1927

In The Alaska Year Book of 1927, the editors summed up the Alaskan transportation situation. "In a pioneer country," they stated, "there is nothing so important at the start as roads and trails. They are the arteries that carry the very life blood of supplies to the far flung outposts, and make living possible until the Constitution catches up with the Flag." Much had already been accomplished in Alaska, such as the construction of the Richardson Highway and the Alaska Railroad. Considering the difficult terrain, the total construction cost of the Richardson Highway, including maintenance for more than twenty years, came to slightly under \$12,000 per mile, a truly remarkable figure. Now the Alaska Road Commission planned to extend this road from Fairbanks to Circle, which, when finished, would link the coast to the Yukon River with a scenic highway about 540 miles in length.¹⁵

More Roads Needed

But despite these accomplishments, the north needed still more roads into new mining districts and there were "sections that only need transportation to make them productive." For example, the Kuskokwim, Lower Yukon, and Nome districts in southeastern Alaska needed more roads. Millions of tons of pay ore in the Hyder district could be developed as soon as connection to tidewater was complete. The promising mineral regions of the Copper and Nabesna country were only accessible by pack trains. In fact, lack of transportation arteries made it impossible to get supplies and mining machinery into most of the territory except at prohibitive costs. Therefore, promising mineral properties were idle and prospectors only performed the annual assessment work to hold the ground, and in the meantime waited for the federal government to build transportation routes.¹⁶

Shortage of Funds

Unfortunately, Congress had never appropriated the full amount the Commission had requested. That body knew of "the crying needs ... [for] roads and trails in the North..." but when presenting their budget to Congress, "some bunchgrass congressman who wants a new post-office building at Pumpkin Center" had always been able to reduce the Alaskan request at least by one half. Therefore, Congress could do nothing more important during its next session than to appropriate funds generously for the construction of new roads in Alaska, the editors concluded. For the 1928 season, Congress appropriated \$860,192.90 to the War Department for its Alaska work, down from the \$889,443.65 it had allowed in 1927. The Alaska fund had yielded another \$134,593.11, while other contributions had amounted to \$258,883.17 for a total of \$1,253,668.18 which amounted to a slight increase of \$36,501.29 over the previous year's total.¹⁷

Lottsfeldt's Trip

While Congress and the territorial legislature wrestled with money questions, the employees of the commission were out in the field performing their duties. For example, C. F. Lottsfeldt, the superintendent of the Kuskokwim district, left Takotna on November 30, 1927 accompanied by Lars Indergard as dog musher and a team consisting of fifteen dogs. The purpose of the trip was to inspect the Bethel district and make recommendations for winter trail work. The two men traveled for 37 days, covering a distance of 931 miles, and averaging about 25 miles per day. The account of their travel and Lottsfeldt's recommendations follow:¹⁸

Arrived at Ophir evening 30th and the next day proceeded toward Flat arriving there on December 3rd. Laid over one day at Flat and then left for Holy Cross inspecting the new work along this route. Stopped evening 5th at Frank Fox's Reindeer Camp, arrived at Holy Cross following day.

Laid over the 7th and the following day left for Paimute, arriving there that evening. Account extremely soft weather laid over Dec. 9th. Dec. 10th we proceeded toward the Kuskokwim River arriving at Kaltshak [sic] that evening. The next proceeded to Tuluksak arriving there the 12th. Stopped evening 11th at Bob Hermans cabin. On December 13th in company with Tony Sumi left to make an inspection of the new shelter cabin at the Foothills, we returned to Tuluksak evening 14th.

On December 15th left Tuluksak and arrived Bethel on the 17th. Laid over at Bethel for repairs to sled the 18th, 19th and 20th. Left Bethel December 21st arrived at Quinhagak December 23rd, stopped the 21st at the new shelter cabin at Black Fish Lake and the 22nd at the Eek schoolhouse.

Left Quinhagak December 24th proceeding toward Goodnews Bay, arriving there afternoon December 26th. Stopped one night Jack Smith's Bay shelter cabin and the other at Indian River shelter cabin. Laid over the 27th at Goodnews Bay. December 28th we proceeded toward Togiak arriving there January 1st. On the 29th and 30th we were held storm bound at the shelter igloo on the South Fork of the Goodnews River. On December 31st we "siwashed it" about four miles from Togiak.

January 1st, 1928 we proceeded down the bay to Johnny Owens place. On the second we left for Kulukuk arriving there that evening. The next day we left Dillingham arriving there on the 5th. Due to poor trail markings and soft weather we were forced to "siwash it" the first night out about ten miles from Kulukuk, and the second evening stopped at the native village at Tuklong.

Laid over at Dillingham the 6th, making arrangements for the summer trail work between Dillingham and Snag Point. The 7th left for Koggiung arriving there on the 9th. Stayed one night with natives six miles from Portage Creek, and the second night at the King Salmon Saltery. This saltery is four miles off the trail but does not greatly lengthen the distance to the Squaw Creek Cannery.

Left Koggiung January 10th in a blinding blizzard and were lucky to reach Libbyville Cannery that evening just at dark. This section is not marked. The next day we proceeded toward Naknek stopping that night at the Portland Packers Cannery. Jan. 12th left for Egegik arriving there before noon on the 14th. Stopped first night at the Halfway Shelter Cabin and the second at Frank Atlonen's six miles from Egegik. This section is well tripoded but due to a very severe blizzard at times it was impossible to see twenty five feet ahead.

Left Egegik January 15th and arrived Kanatak January 17th at 2 P.M. Stopped the first night at West End Becharoff Lake shelter cabin and the second night at the East End Becharoff Lake shelter Cabin.

Route 92 P Holy Cross-Kaltshak [sic] 56 Miles Trail

The section of this trail between Holy Cross and Paimute, that is the part traveled along the river should be staked with willows every winter. The river between these points has several channels, some of which are several miles longer than others. Strangers often take the longer channel due to lack of markings.

The section of the trail between Paimute and Kaltshak can be greatly shortened by cutting through some heavy timber near Paimute. Would also culminate travel on several sloughs which overflow badly. A tundra fire burnt down many of the old tripods which should be replaced next fall.

Allotment Required \$785.00

Route 92 Tuluksak-Bear Creek 32 Miles Trail.

Inspection was made over this route and only necessary maintenance need to be performed next year.

Route 92 Aniak-Tuluksak 60 Miles Trail.

The crossings on the river route between these two places should be marked with willows right after the freezeup every winter. A short land portage cut out between Ohogamute and Kaltshak would shorten this trail two miles.

 Allotment Required \$375.00

Route 92 L Crooked Creek-Aniak 74 Miles Trail.

All the crossings on this river route should be marked with willows every winter after freezeup.

 Allotment Required \$75.00

Route 92 B Bethel-Tuluksak 44 Miles Trail.

This section should also be marked with willows on the river every fall as it is very easy for travelers to get off the beaten trail. Because of the river cutting in the banks between Akiak and Bethel need to be cut down every year.

 Allotment Required \$125.00

Route 92 A Bethel-Quinhagak 90 Miles Trail.

This trail is now in good condition, well marked and tripoded the entire distance. Beacons have been placed on the edge of all the larger lakes. Only maintenance work need be performed next season.

Route 92 F Quinhagak-Goodnews Bay 60 Miles Trail.

This trail is in first class condition with only maintenance needed next season.

Route 92 G Goodnews Bay-Togiak 53 Miles Trail.

This trail is far below standard and without a guide is nearly impossible to follow. The first four miles out of Goodnews Bay there are no tripods, and the remainder of the distance they can only be found here and there. Tripods were constructed from small willows and tied at the top with rope. These tripods will not stand up against the weather in this section where at times they have very violent winds. If the commission desires to have this as a standard part of the route between Bethel and Kanatak the entire work will have to be done over in a year or two I don't believe any of the present markings will remain. This work will be rather expensive as poles for good tripods cannot be obtained closer than Akiak.

Guthries Inspection Trip

Captain Ralph R. Guthrie undertook a much shorter inspection trip in February, 1928. Employing the same musher with a team of seventeen dogs, he left Lawing on February 5 bound for Kenai which they reached in three days. After a one day rest the party returned to Lawing. The weather was variable, temperatures fluctuating from +40°F to 0°F. The two men experienced snow drifts three feet deep, and on the return journey encountered a snow storm which dumped eighteen inches on the trail. They followed a well-broken trail, except during the snow storm on Kenai Lake, and met eleven dog teams during their travels. Guthrie estimated that this amounted to a fairly heavy traffic of about forty dogsleds during the winter months. Guthrie's report of his journey and his work recommendation follow:¹⁹

The route of the inspection started at Lawing, Mile 25, U. S. Railroad, and led over the ice, down Kenai Lake, to the lower end. Thence up the Kenai River a short distance, off the river and up the mountain side to an elevation of approximately seventy-five feet, and rather precipitous, for a mile and a half to Cooper's Landing. About this section of the lake it may be said that travel in the winter is very precarious, there being a considerable number of air holes off Black Point, opposite the mouth of Quartz Creek. During the past twenty years many teams have broken through. The mile-and-a-half section between the mouth of Kenai River and Cooper's Landing is maintained apparently by the fire patrols, and is the worse place on the trail. A little grading, the rehabilitation of one small bridge, and the hewing down of a few trees here would do very well and could be accomplished at a cost of one hundred dollars. On the lower end of Kenai Lake to a point seven and one half miles beyond Cooper's Landing there is an average of one cabin per mile, and all are suitable for shelter. The prevailing grade is about thirty per cent.

The first shelter cabin encountered is located fifteen miles from Cooper's Landing. It was in good condition, corrugated iron roof, one door, two windows, sheet iron stove, five joints of pipe, pole bed, and dog cabin. The latter was about twelve by twelve feet inside measurement, the dimensions of the shelter cabin itself being fourteen by sixteen feet. After leaving this cabin no further shelter was encountered until the cabin known as the "Midway Cabin," of approximately the same dimensions as the first, but without dog shelter, was reached. This was twenty-nine miles from Cooper's Landing. This cabin was very comfortable, indeed, with a sheet iron stove, a pole bed, and the comforts which could be expected under

the circumstances. It is here suggested that these cabins (all of them) could be improved by battening up or filling in the interval between the iron roof and the pole roof, six inches beneath. Into this open space the snow drifts and melts from the heat of the stove, causing leakage in the vicinity of the bed. The approximate cost for three cabins on the Kenai-Lawing trail in the opinion of the undersigned could be covered by one hundred and fifty dollars, or fifty dollars per cabin. Between Cooper's Landing and Midway Cabin only two fallen trees were encountered, and they were lying across the road as it led across the second small lake after leaving Cooper's Landing. They were about fifty yards apart, and could be removed by one man in about a minute. A few objectionable "nigger-heads" were found on the trail between a point eight miles from Coopers Landing and Midway Cabin, and again six miles beyond Moose River and the village of Kenai. The third relief cabin, located Mile 19 from Kenai, was in the same condition as the others; very habitable, but it was found that natives had been using it as a trapper's cabin, and it is strongly suspected of being infested with vermin.

Using a twelve-foot sled and seventeen dogs with a broken trail it was found that from forty to sixty miles could have been easily accomplished in a day, any place on the road. At approximately twelve miles from Kenai village there is a plateau with a very steep incline, varying from thirty-five to fifty per cent grade, and winding in and out between trees, very dangerous to teams. From this point toward Kenai the Road Commission trail is practically abandoned and an old Siwash trail, leading over frozen swamps, is used. It is recommended that the Road Commission accept the judgement of traffic in this regard, and that the Siwash trail be adopted and improved. Three miles of trail in the vicinity of Mile 19 from Kenai has also been abandoned by traffic in preference of a shorter cut, apparently to good advantage. It was found that the trail is opened each winter by the natives, and that in spite of any advantage which might exist in the new government trail, they prefer the one that they laid out themselves. In the judgement of the undersigned, the only way to get those sections of the trail used would be to send a trail breaking crew over the trail early in the season. The advisability of this is questioned.

In general, the trail from Lawing to Kenai is not in bad condition for either heavy or light hauling. It is believed that Duncan Little, of Cooper's Landing, with one assistant could go over the entire trail in two months next summer and put it in excellent shape. No one could hope to remove all of the nigger-heads, but the more prominent ones could be smoothed away. All the equipment needed would be a couple of axes, cross cut saw, spades, hammers, nails, and a couple of pack horses. Bridges and shelter cabin roofs could be repaired, and the material found on the ground. Mr. Little has the reputation of being extremely conscientious and industrious, and has both experience and common sense. It is recommended that he be put in charge of the work and authorized to employ one man as an assistant, and that the period of his employment not exceed two months.

Answering the questions in your memorandum of May 20, 1927, for all superintendents, the following information is given:

Length of road from Lawing to Kenai, approximately 120 miles.

Shelter cabins, Mile 19 from Kenai and Mile 37 from Kenai. A privately owned prospector's cabin used as a shelter cabin at Mile 46 from Kenai.

General ruling grade, 20 per cent.

Maximum grade encountered, 50 per cent, 150 feet long. Maximum grade not objectionable if trees are cut which now endangers sleds from turning over. Cost of improvement \$20.00.

Two-horse teams cannot be used.

One small bridge to be renewed at Cooper's Landing.

Grading not necessary, but strong shovel work required at approaches to two small lakes between Cooper's Landing and Midway shelter cabin, approximate cost \$20.00

No new bridges required.

Road now used does not drift nor glacier badly. Trail is located so that approximately thirty-nine miles is over frozen lakes and streams. This not objectionable.

Nigger-heads and stumps are to be removed in a few instances.

Condition of shelter cabins excellent, except for roofs noted. Stoves have all been installed by private interests, and are at present adequate, but should be replaced next summer by new stoves suitable for both heating and cooking.

Character of traffic on route, foot, and dog sleds, about forty sleds per month.

This route can not be used in the summer time without long and difficult detours on account of so much of it being over ice. It is purely a winter trail, and if it is to be converted into a summer trail, as well, a road must be cut from Lawing along the north bank of Kenai Lake to Cooper's Landing, and from a point seven and one half miles beyond Cooper's Landing the road must be widened and improved, detouring all lakes and streams, the entire distance to Kenai. As seven lakes and three streams are used, this is liable to be expensive.

In case a wagon road were contemplated, it would necessitate a wagon road along the north bank of Kenai Lake to Cooper's Landing, or the use of the railroad outlet at present supplied by the Quartz Creek route to Moose Pass and thus junction with the railroad, cost about ten thousand dollars (\$10,000.00) per mile. From the lake the road could then follow the north bank of Kenai River along the present trail branching off onto a trapper's trail twelve miles from Cooper's Landing to Skilak Lake, cost about five thousand dollars (\$5,000.00) per mile. Thence along the north bank of Skilak lake to the Lower Kenai River to the mouth of Moose River which must be spanned by new fifty-foot suspension type bridge, cost of road ten thousand dollars

(\$10,000.00) per mile, cost of bridge five thousand dollars (\$5,000.00) to ten thousand dollars (\$10,000.00). From bridge the road could take direct route to Kenai village over tundra, cost about five thousand dollars (\$5,000.00) per mile.

RECOMMENDATIONS

It is recommended that two good trail construction men be employed for two months next summer to go over the entire trail from upper Kenai Lake to Kenai village to make common sense repairs to the winter trail and to shelter cabins, using material to be found in the forest with a moderate amount of equipment and material furnished, and no further expense undertaken. Also that plans be formulated to construct a winter trail around upper Kenai Lake from Lawing, for the purpose of avoiding the obvious dangers to lives and mail, involved in crossing over treacherous stretches of thin ice abounding in air holes at different periods during the winter.

The Anchorage-Matanuska Road

There can be no doubt that the Commission had assembled a knowledgeable headquarters and field staff over the years. Furthermore, the Commission and the Territorial Board cooperated smoothly on many projects, the former serving as the construction contractor and the latter supplying the funds. At times, however, there arose disagreements. One of these concerned the proposed construction of an Anchorage-Matanuska road. The 1927 territorial legislature, at the urgings of the legislative delegation from the third judicial division, had included \$25,000 for the undertaking. Perhaps the delegation had halfheartedly urged the appropriation at the behest of the Anchorage Chamber of Commerce, because the money measure stated "that in performance of said work...said Board shall not expend more than the sum of \$200,000.00..."The legislators knew that both the Territorial Highway Engineer and the Commission had estimated the cost of the project at \$318,000 without surfacing. The legislature knew that the Territorial Board could not proceed on a project which it could not finish - but voting the \$25,000 certainly endeared the politicians to the Anchorage electorate.²⁰

Elliott Rejects Anchorage-Matanuska Road

Major Malcolm Elliott, the Commission president, was appalled about the very idea of building this road. While residents in most parts of Alaska desperately needed the most rudimentary transportation network, Anchorage citizens demanded such a vast expenditure on a route already provided with a railroad. He carefully explained to the Territorial Board that the Commission would not approve the expenditure of federal funds on this project. The road was not needed, and the use of federal funds for the Anchorage-Matanuska road would inevitably deprive other communities of badly needed transportation facilities and of the full assistance from federal monies to which they were entitled. Furthermore, the Commission had an understanding with the Secretary of the Interior that it would not parallel existing railroad lines. The \$318,000 estimate was low, because it contemplated the joint use with the railroad of bridges over certain streams with no assurance that this heavy use would not require early rebuilding. There was no allowance for the maintenance of the completed sections during the construction phase. Including these factors, Elliott believed that the total cost of the project would amount to approximately \$500,000, a sum all out of proportion to the benefits expected. In short, the proposal was economically unsound and therefore not worthy of federal assistance.²¹

Elliott Warns That Congress Would Consider Road Waste of Funds

Worse yet, Elliott warned that Congress would most likely take a very dim view of the Anchorage-Matanuska road. Legislators very quickly would conclude that a territory which could afford the luxury of a highway paralleling a railroad clearly had advanced beyond the pioneer stage and no longer needed "appropriations for roads amounting to sums much larger than the per capita contributions for Federal aid in the States." He assured the Territorial Board of his "disinclination to interfere in any way with local control of how territorial money shall be spent," but in this case asked that the project at least be delayed. He concluded that

if this did not happen it probably would result in decreasing federal contributions for Alaska's road building program. And that, he asserted, would be injurious to Alaska's best interests.²²

Territorial Board Seeks Legal Advice

The Territorial Board thereupon sought the advice of Alaska's Attorney General, John Rustgard. He advised that because the estimated cost of construction exceeded the amount authorized by the legislature, the Board had no authority to proceed. The Anchorage Chamber of Commerce was bitterly disappointed at Rustgard's decision. Senator Arthur Frame, the sponsor of the measure authorizing the funds to begin the project was present at the Chamber meeting. He explained that the politicians had meant well, and blamed those in charge of road building operations in the territory of not wanting to connect the Anchorage and Matanuska road systems. Therefore, they "resorted to the adverse opinion of the attorney general as an excuse."²³

Territorial Board Holds Special Meeting

On March 29, 1928, the Territorial Board held a special meeting at which it accepted Rustgard's opinion and decided not to proceed with the work. The question then remained could the Board use the designated \$25,000 for general roadwork in the third judicial division? Attorney General Rustgard put the members of the Territorial Board at ease when he ruled that the construction of the Anchorage-Matanuska road was not compulsory but rather discretionary. Therefore, the attorney general ruled, the \$25,000 could be expended for general road work in the third division.²⁴

Chamber Memorializes Territorial Legislature

That was not the end of the matter, for by early March 1929 the legislative committee of the Anchorage Chamber of Commerce had prepared a memorial for the territorial house and senate. The Chamber complained

that because the Alaska Road Commission, "a federal agency," had been unwilling to cooperate in the construction of the project the territorial \$25,000 had not been used. It reiterated the necessity for building the road because it would open "one of the most fertile and promising agricultural regions in the Territory of Alaska" and asked that the legislature appropriate \$50,000 for the following biennium "for the purpose of building so much of said road as the sum permits to be constructed."²⁵ The Anchorage-Matanuska road eventually was built-but that was in the future.

President Elliott Reviews Accomplishments

In 1928, President Elliott proudly reviewed the territory's transportation system for the Alaska Year Book. The territory's road system, he told his readers, consisted of one main axis connecting Prince William Sound with the Yukon River, and a considerable number of small road nets which connect the various commercial, mining, and agricultural centers with supply bases located on the coast, railroads, the main highway, and the navigable rivers. The Commissions proudest accomplishments were the Richardson and Steese Highways, extending from Valdez to Circle to the Yukon River. At its northern terminal in Fairbanks, the Richardson Highway joined the northern terminal of the Alaska Railroad main line which connected the city with Seward. Together, the highway and railroad formed a belt line traversing much of interior Alaska.²⁶

The Copper River and Northwestern Railway ran from Cordova on Prince William Sound to the Kennecott copper mines. Chitina, a station on the railroad, also was the southern terminal of the Edgerton Cutoff, a branch of the Richardson Highway. The Steese Highway extended north from Fairbanks to Circle City on the Yukon River. Elliott pointed out that Circle City was on the route which, beginning at Skagway, followed the White Pass and Yukon Railroad to Whitehorse and then by river transportation went down the Yukon River through the Klondike goldfields and Dawson into central Alaska. These railroad, highway and water routes formed the framework of a transportation system covering a wide area rich in natural resources.²⁷

Cooperation With Forest Service

The Commission and the Forest Service were developing small road systems which either tied in with the main rail, highway and river systems or were located along the coast, connecting with good harbors. In southeastern Alaska, small highway systems centered at Ketchikan, Hyder, Wrangell, Petersburg, Sitka, Juneau, Haines and Skagway. Each of these towns and settlements possessed sheltered, deep-water harbors. Along the remaining coastline, roads connected almost all ports with the immediate hinterland. Small road networks of this kind existed at Cordova, Valdez, Seward, Kodiak, Iliamna, Kanatak, Nome and Deering. Settlements along the Yukon and Tanana Rivers, like Eagle, Beaver, Rampart, Brooks, Tanana Hot Springs and Ruby had short road systems. In the upper Kuskokwim Country travelers obtain access to the river over short road systems connecting with McGrath and Takotna. Similarly, a short road connected the mining areas around Flat and Otter with the Iditarod River, and Wiseman, the head of small-boat navigation of the upper tributaries of the Koyukuk River north of the Arctic Circle possessed roads leading to the nearby mines.²⁸

Transportation Network

Automobile, wagon and sled roads radiated from mining, agricultural, and trapping operations to the Alaska Railroad. Prospectors, miners, and homesteaders on the Kenai Peninsula, the Matanuska Valley, in the vicinity of Talkeetna and in the important Kantishna region used Commission built roads and trails which enabled them to transport supplies to their workings and ship their products to outside markets. A highway under construction from the railroad into Mt. McKinley National Park eventually was to lead to the base of the mountain, opening the park to public use. Homesteaders in both the Matanuska and Tanana Valleys did considerable farming. The Commission had built local roads connecting these operations to the railroad; and the country adjacent to the Richardson Highway and the Copper River and Northwestern Railway was connected with short roads

to the mineral operations in the vicinity of Kennecott, Kotsina, and the Chistochina country.²⁹

Length of System In 1928

As of 1928, the entire road system consisted of 1,623 miles of automobile, tram, and wagon roads, 1,375 miles of winter sled roads, 7,044 miles of rails, and 712 miles of flagged winter trails. The Alaska Road Commission had built this imposing transportation system within the short span of twenty-four years at a cost of about \$13 million. About \$4 million of this total, or about 30 percent, had been derived from Alaskan sources, while the federal treasury had contributed the balance.³⁰

When the Commission had started its labors in 1905, there had been no roads worthy of the name. Inhabitants freighted supplies over unimproved trails or used pack horses and dogsleds. Life was primitive by necessity in any community not close to water transportation. All this had changed, for the transportation system had enabled the residents to import all the conveniences of modern life, yet large areas of Alaska, capable of economic development, still were a wilderness. Much work needed to be done yet, Elliott concluded.³¹

Edmunds Makes Inspection Trip

Members of the Commission worked hard. M. C. Edmunds, the superintendent for the Anchorage district, took a ten day hiking trip inspecting various routes between Cache Creek and the Yentna River in the fall of 1928. The full report follows to give readers a feeling for the country covered:³²

The following report covers an inspection trip during which the various routes mentioned below were covered, route 51, 51-D, 51-E and 20-H.

The main object of the trip was to cover routes 51-D and 51-E, between Cache Creek and the Yentna river; no one attached to the force at present, had been over the trails, and the only information available

was obtained from people in the district, and it appears that the more persons talked the less reliable information was obtained.

As it is not likely that the trip will be taken again for sometime, as there is no necessity until more development takes place, I am writing a report of the trip, for future reference.

The trip was taken on foot, carrying ten days provisions, making a pack of about 60 lbs to start off, and 25 lbs when I finished up at the railroad.

I had intended to take a dog along, carrying some of the load on it, but the dog was too soft, and I had to leave him the second day out.

Itinerary.

- October 1st. Left Anchorage 1.45 p.m. by A.R.R. arriving Talkeetna 6 p.m.
- 2nd Left Talkeetna 7 a.m. stopped at A.R.C. cabin at Moose Cr. 12 miles out. arrived 1.30. p.m.
- 3rd Left Moose Cr. 7 a.m. arrived Peters Cr. noon mile 23 1/2, after lunch went to Lee's cabin on Black Creek, mile 29, arriving 2 p.m. (this cabin used by public for shelter.)
- 4th Left Black Cr. cabin 7 a.m. went to the A.R.C. road camp near Windy, a tributary of Cache Creek, arriving there 11:20 a.m. stayed here the night. traveled 10 miles. Waited over here for one day, in order to wait for two trappers who were going to Sunflower Creek.
- 5th Went, with trappers Wagner and Strom, to Falls Creek, stopping the night in a cabin belonging to Nagley, the merchant at Talkeetna, evidently used by the public; distance traveled 2 miles.
- 6th Left the cabin on Falls Creek, which is located about one half mile above the mouth at 8 a.m.; went down Cache Cr. to the mouth of Short Cr. then over trail to the Treasure Creek shelter cabin, arriving there at 6:30 p.m., distance travelled 18 miles.
- 7th Left the A.R.C. cabin on Treasure Creek 7:30 a.m., went to Wagners cabin on Sunflower, about three miles below the cable Crossing, arriving there at 1:30 p.m. distance traveled 10 miles.
- 8th Left Wagner's cabin 8 a.m. went to Pat Collins camp on Notobac creek, (the men who named this creek evidently must have been out of tobacco when they struck here) a tributary of Twin Creek. Stopped at Hugger's camp on Mills Creek enroute; distance between camps one and a half miles, distance traveled ten miles, the last two miles being on the South East slope of Fairview mountain. Was accompanied by Wagner this far. Arrived at Collins camp 5 p.m.
- Oct. 9th Left Collin's camp 7:30 a.m., after one mile reached the regular Yentna-Mills Creek trail, following same until

- I reached the camp of McLean and Patterson, on the Clearwater, one mile above the mouth, where it enters into the Yentna River. Arrived here 3 p.m. distance traveled 15 miles.
- 10th Left McLain and Patterson's cabin 7:30 a.m., went down trail to the Yentna river, inspected cabin, then proceeded down the river to the cabin of a trapper named Briggs, who had a light boat which I intended to get to go down the river. Found upon arriving that the boat was twenty miles further down stream, at the mouth of Donkey Creek slough, so walked down there.
Had thought that I could get a trapper to take me down to the Station as they all have Johnson outboard motors, but ice was running in the Yentna, and the boats were all beached for the winter, and it was doubtful whether they would work in the ice. Arrived 5:p.m. distance traveled 27 miles.
- 11th Examined boat, which had not been in water for two seasons, calked two seams with gunnysack and old shirt, which were open for a good half inch, put a patch over a small hole in the bow, and started off at 10 a.m., arriving at the abandoned town of McDougall at 5:p.m. wet snow all day, distance traveled 18 miles.
- 12th Left McDougal 6:45 a.m. arriving at Susitna Station 2:p.m. had to break shore ice in order to beach boat, weather wet with snow and rain. Distance travelled 36 miles.
- 13th Left Susitna Station 7:a.m. over the winter trail for Nancy, on the Alaska Railroad, arrived at the shelter cabin at mile 10.5 at 2:p.m. distance traveled 11.5 miles.
- 14th Left shelter cabin 6 a.m. arriving at Nancy 1:p.m. caught freight train into Anchorage, arriving 8:p.m.

Route 51. Talkeetna-Cache Creek.

This route is being maintained each year, and will be covered in the annual report, so there is no necessity of mentioning it at this time.

Route 51-D. Yentna-Mills Creek, (23 miles trail.)

This is a pack trail leading from the Yentna river, on the left limit of Clearwater Creek, to the confluence of Twin and Mills Creek which head against Fairview mountain, in the Fairview District.

Leaving the river the trail crosses a flat country for a distance of three miles, covered with small green spruce and an occasional swamp, to high ground running in the same direction as the Yentna river, which runs in a Southeasterly direction.

The ridge is cut through by the water of Clearwater Creek, which runs in a Southerly direction.

After leaving the flats, high ground is followed for a distance of four miles, through spruce and birch timber, along the left limit of the creek, sometimes close to the creek, other times away out of sight, to a small creek running West; after crossing the creek, which is bridged, the trail continues along the high bench near the stream, with a fair growth of spruce, which comes to an end about mile 12, after which a heavy growth of willow and alder is encountered, to mile 15.

At mile 8, a small cabin is passed on the left of the trail, or West, which could be used in an emergency, but it is very small being about 6 feet by 8 feet, with a flat roof.

At mile 15 the trail leaves the Clearwater Creek watershed, running down the right limit of Twin Creek, on a high bare bench to its junction with Mills Creek, which is the end of the trail.

Very little work was done on the trail after passing the 15 mile post, the chief item being tripods that were erected to mark the trail.

The point where the trail starts down Twin Creek is about one mile from Skookum Pass, which is the route followed by the miners and trappers in going from the Clearwater Creek watershed to the Cache Creek district.

With the exception of some swampy ground across the Yentna flats, which could not be avoided, the trail is located in good ground, and is well defined.

It appears, however, as though it would have been better to have continued the trail through Skookum Pass to the mouth of Cottonwood Creek, instead of going down the right limit of Twin Creek, as this would have kept the trail on dry ground, passing close to the location of the men mining there, and been considerably shorter for a main route.

Considerable timber had fallen across the trail in places, but where it passed through willows and alder the cutting was very plain.

The shelter cabin on the Yentna was in good condition, except for the roof, which should be replaced with an iron roof, and a floor put in.

Arrangements were made to have the trail cleared up, and for the repairing of the shelter cabin next season.

This route is now in good condition, and, with the clearing of wind-falls occasionally should be ample for the requirements of the district for years to come, unless further development is shown. At the time the trail was put in there were some good publicity men interested in the district, and it appeared as though the district might develop into a mining camp.

Our friend Mr. Ben Grier, had a lot of property at the mouth of Twin and Mills Creek a few years ago, but, being unable to interest any capital in the venture, it has been abandoned, and has since been re-staked by another pencil miner, who has done no prospecting of any amount to determine whether it is commercial ground or not.

C. J. Lincke, an old newspaper man, has been in the vicinity for some years, off and on, and has staked a lot of ground in the district; He also does no prospecting, and has the means of keeping people off the ground who might dig up something. The only evidence of work done on his property that I saw was a small hole about three feet wide by six feet long, three feet deep, that any ordinary laborer would dig in two hours.

While it is possible that something may show up in the vicinity that may pay to work by modern methods that would not be profitable to work by olden methods, several of the tributaries of Mills and Twin Creek were prospected and mined years ago.

A man named Pat Collins is the only one left of the early miners, he traps a little in the wintertime.

A man named Hugger has been in the district three seasons, he is mining on Mills; these are the only two men attempting to mine, and I venture to say they do not average more than \$1,000.00 a year output between the two of them.

In returning down the Yentna River to Susitna Station, I found very little activity except for trappers and furfarmers, who are located on an average every six miles or so along the river bank.

The white men seemed to be ambitious and energetic, building trails, cabins and doing other work in readiness for the trapping season.

As far as I could ascertain, there appeared to be no activity in prospecting or mining, probably the high prices paid for fur during recent years made trapping more profitable.

There appears to be no need for any road, trail, or shelter cabin work; the main artery of travel is water, and the trappers living along the river are glad to welcome occasional travelers, who bring recent news, and are available for carrying mail.

The Yentna River, from Youngtown to the mouth, is very easy to navigate in a small boat, there being no rapids or other places where there is any hazard. The sweepers along the bank, and the snags in the channel, are easily seen and avoided.

The only place encountered was on the Susitna River, after leaving the mouth of the Yentna, where whirlpools were active; these however, are plainly seen and there is ample room to steer clear.

The velocity of the current near the mouth of the Clearwater is about four miles per hour, while it is only around two miles near the mouth.

The trappers and an estimate of their earnings during the last season adjacent to the river, is as follows:

Name	No. men	River	Estimated Earnings
Gasnon and one	2	Kichatna	\$5,500.00
Mike Stripka	1	East Fork	3,000.00
McLain and Patterson	2	Yentna	5,000.00
Corigan	1	"	2,200.00
Briggs	1	"	3,000.00
Jones and wife	1	"	1,500.00
Sholbarger, wife, 3 children	1	Skwentna	5,000.00
Reamer, McElroy and one	3	"	5,000.00
Ross, wife, 1 child	1	"	2,000.00
Link	1	Yentna	5,000.00
Nelson	1	"	500.00
Oman	1	"	800.00
Zorn (does no trapping, a little prospecting)			
Meller	1		1,500.00
Unknown	1		1,500.00
Madison Bros.	2		<u>2,500.00</u>

About six of these people go to Talkeetna, over the trail, with their furs during the winter, the remainder come down the river either taking the Nancy-Susitna trail over the snow, or going by boat to Anchorage and the railroad.

Route 51-E. Cache Creek - Mills Creek 35 miles trail.

This is a summer trail, used as a means of communication between the people of the upper Yentna river, including the Fairview mining district, with the Cache Creek mining district, and by means of the system of roads leading from there, with Talkeetna and the Alaska railroad.

It is suitable for foot and pack trail travel.

In the winter time there is no need of any trail; swamps, lakes and rivers, which constitute the country South of the summer trail, freeze over, and one can go in any direction, and the several cabins belonging to trappers provide places where one may obtain shelter.

The winter travel connects with the Cache Creek trail by means of the Mile 32 Spruce Creek trail, route no. 51-D.

The summer travel leaves Cache Creek by means of two routes, horse travel goes up Dollar Creek to the junction with Little Dollar, and foot travel follows Short Creek for a distance of one mile, then drops over the bench to the mouth of Little Dollar Creek, from this point one trail is followed.

The trail follows up Little Dollar Creek for one quarter of a mile, then climbs on the left limit of the creek, following the creek which drains a flat plateau, until it forks, near the head. The creek is crossed at this point, near the top of a steep slope leading down to a large flat drained by the Kahiltna River. The rim is then followed for one mile until an old camp is reached, known as the Barrenburg or Shell camp, about eight miles from Cache Creek.

From this camp an old trail is followed, known as the "Hughes" trail, over which attempts were made to haul supplies to the Cache Creek diggings from the Yentna, in the early days, before the road was built from McDougal.

The trail was also used by Dr. Cook, during the time he was scouting around when attempting to climb Mt. McKinley.

The trail for the first eight miles is fairly good, except some willows need cutting, and it is inclined to be wet for a couple of miles until the rim, on the left limit of the Kahiltna watershed, is reached.

From the Shell camp the trail drops down to the level of the Kahiltna flats, descending 1200 feet in the course of a mile through a well timbered slope covered with spruce, willows and alders, then continuing for two miles through the timber, skirting lakes and beaver dams to the edge of the timber, the horse trail coming out about one mile below the cable crossing on Granite Creek, about twelve miles from Cache Creek.

Granite Creek drains the left or East side of the Kahiltna Glacier, and the cable tramway spanning this stream is located about two hundred yards above the end of the glacier, where the stream is in one channel, which is not subject to change.

The tram was in good condition, and no difficulty was found in making the crossing.

The left side of Granite Creek, at the cable crossing, is in timber, while the right side runs alongside the glacier, the cable being anchored to rocks and the landing being on rocks, forming part of the glacier.

The trail on the West side of the crossing follows the glacier for two hundred yards until dropping down on the flat, but no difficulty is found in getting over this stretch.

There is no timber between Granite Creek and the Glacier stream which drains the West side of the Kahiltna Glacier, except for some scattered willows, a distance of four miles, the trail keeping about two hundred yards South of the end of the glacier.

The water of the Kahiltna River, draining the glacier, was in three channels, about 75 feet wide, the depth at the deepest place where a ford was made being 18 inches.

A cable tram is to be put across this stream this season, materials were being freighted there during the time I passed through.

The stream draining the West side of the glacier was forty feet wide and 12 inches deep, and easily crossed, at mile 16.

West of the stream the trail goes through a dense growth of willows and alders, but the trail is well defined, and once on it, it is easily followed.

Continuing along the trail a distance of three miles, Treasure Creek is reached, at mile 119, where the Alaska Road Commission shelter cabin is located, on a small bench about twenty feet above the level of the creek.

Spruce timber has been gradually getting thicker, until there is good timber where the cabin is located.

The cabin is located about 250 yards off the trail, to the North, and 300 yards from water, but is well supplied with dry wood, and is in a dry location.

Signs are placed on the main trail, so that it is readily seen by travelers.

Owing to the difficulty of getting material on the site, the roof was made out of poles, with moss and dirt, which did not prove very satisfactory this last season, during the continual rain.

During the night I spent there, the roof leaked all night, and it kept the three of us busy keeping the fire going, in order to try and keep warm.

Arrangements were made for putting galvanized iron roof and a floor in the cabin, the work to be done in the spring when conditions were favorable for hauling the material.

Leaving Treasure Creek cabin the trail traversed level ground for one mile through timber, then climbed for one half mile on a ten percent grade, which increased to about twenty per cent towards the top, to a level plateau, with an elevation of 1500 feet, formed of grassy meadows, (some wet and swampy) small lakes, and high mounds covered

with green spruce, which made a picture very pleasing to the eye, but not so attractive when considered from the viewpoint of the trail situation.

Keeping in a Westerly direction, with the trail now getting very indistinct through the meadows, we reach Lake Creek, at mile 24.

Lake Creek is crossed by means of a cable tram, which was in good working order. A fjord is located just above the cable, where horses can cross the stream, while below the water from different channels collects, and runs through swampy ground.

There is no timber of any size on Lake Creek.

From Lake Creek the trail continues in a South Westerly direction, following timber and high ground where possible, to Sunflower Creek, at mile 28, where another cable crossing is located.

The crossing is located at the head of a canyon, in an ideal location, about one mile below the place forded by horses.

Spruce and cottonwood is plentiful along the banks of Sunflower Creek.

There is a trappers cabin about three miles below the cable crossing on Sunflower Creek, also one on the right limit of Chelantna Lake about two miles above the tram, which are available for shelter for travelers.

Leaving the Sunflower cable, and keeping in the same general direction for a distance of two miles, Camp Creek is reached at mile 30.

Camp Creek is forded just above the mouth of Cottonwood Creek, it was about 75 feet wide and 15 inches deep at the time I crossed.

There was very little water in Cottonwood Creek, it was about six feet wide and 12 inches deep.

There was a good growth of Cottonwood timber along the course of both streams, and some spruce up to 10 inches diameter.

A camp belonging to C.J. Lincke is located on the right limit of Cottonwood Creek, about 1/4 mile above the mouth, which is available for shelter for mushers traveling through.

A bear or wolverine had visited the place, and made a mess of things generally; one of the articles chewed up being a Corona typewriter which they must have considered to be out of place in the wilds.

After leaving Cottonwood Creek the trail crosses a grassy meadow to the left limit of Little Skookum Creek, about one mile distant, and then follows through dense willows and alders the left limit of the

creek until near the head, when the creek is crossed, and the trail follows along high ground, on the Southeast side of Fairview mountain, to Skookum Pass, at mile 34.

Skookum Pass is the divide between Mills Creek and Twin Creek, near the summit of Fairview mountain. It is a good location for a trail as the ground is firm; there are several patches of willow growths along the mountain side, but generally these can be avoided.

From the pass the tripods of the Yentna-Mills Creek trail can be seen along the skyline of the Clearwater slope, which is fifteen miles from the Yentna river.

There is one miner, Matt Hugger, mining on Mills Creek, about one mile from the head, working by the open cut method, with sluice boxes running through the cut into which dirt is shoveled by hand; he was the only man doing any work on Mills Creek.

Another man is working on Notobac Creek, a tributary of Twin Creek on the right limit, using the same method of mining. He had everything in good order, and appeared to be working to advantage; he was the only man working on Twin Creek. His name is Pat Collins.

There is gold scattered all around the South slope of Fairview mountain, which is formed of gravel, work has been done on the different creeks since 1906, and several men have taken out small amounts varying from \$3,000.00 to \$5,000.00, but no big money has been made.

Water is very scarce, which is a detriment to small miners, but would not effect the working of the ground by a large company, who could bring water for many miles, but a large company is not liable to start operations unless much more prospecting and development is done.

In addition to the two miners mentioned, whom I do not believe take out \$1,000.00 a year between the two of them, there are other people interested in the district who call themselves prospectors, who have a lot of ground staked, but do no development work to ascertain whether the ground can be worked or not.

These speculators are a detriment to the district, as they tie up a lot of ground that other people who want to dig might file on, and develop something.

At present time there are possibly ten trappers, the two miners mentioned, and a few others using this trail.

Until more development work is done, or something else shows up, the present trail, with the four cable crossings, and the shelter cabins on Treasure Creek and Spruce Creek, which ensures safe travel during the summer and winter, is sufficient, with a little additional cutting and staking.

Despite a perpetual shortage of funds, the Commission undertook much exploratory work. Should monies become available, roads and trails could be constructed quickly because informal surveys had already been accomplished.

Footnotes

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2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Operations, Part II, 1929, p. 143.
9. Stansfield to Steese, July 3, 1926, Oliver to Stansfield, July 14, 1926, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.
10. Stansfield to Oliver, July 25, 1926, Oliver to Stansfield, August 9, 1926, Ruby E. Allen to Alaska Road Commission, September 4, 1926 Steese to Allen, September 20, 1926, R.G. 30, A.R.C., box 65637, Federal Records Center, Seattle, Washington.
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12. Steese to Stansfield, April, 13, 1927, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.
13. Stansfield to Steese, May 1, 1927, Steese to Stansfield, May 14, 1927, Stansfield to Steese, August 29, 1927, Steese to Stansfield, September 14, 1927, Stansfield to Elliot, December 5, 1927, Gillette to Stansfield, December 6, 1927, R.G.30, ARC, box 65637, Federal Records Center, Seattle, Washington.
14. Gillette to President of the Board, October 19, 1928, R.G. 30, ARC, box 65637, Federal Records Center, Seattle, Washington.

15. The Alaska Year Book, 1927 (Seattle: The Alaska Weekly, 1927), p. 13.
16. Ibid.
17. Ibid; Operations, Part II, 1928, p. 13.
18. Lottsfeldt to Engineer Officer of the Board, February 21, 1928, R.G. 30, A.R.C., box 65637, Federal Records Center, Seattle, Washington.
19. Guthrie to Alaska Road Commission, February 17, 1928, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
20. Rustgard to Parks, March 28, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
21. Malcolm Elliott, "Statement of the Alaska Road Commission's Attitude on Anchorage-Matanuska Road, "March 26, 1928, Elliott to Territorial Alaska, March 26, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
22. Malcolm Elliott, Statement of the Alaska Road Commission's Attitude on Anchorage-Matanuska road, March 26, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
23. Rustgard to Parks, March 28, 1928, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington, Anchorage Daily Times, April 13, 1928.
24. Parks to Rustgard, July 24, 1928, Rustgard to Parks, July 30, 1928, R. G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington.
25. Anchorage Daily Times, March 5, 1929.
26. Major Malcolm Elliott, "The Road System of Alaska," The Alaska Year Book (Seattle, Washington: The Alaska Weekly, 1928), p. 34.
27. Ibid.
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CHAPTER NINE

THE LAST FEW YEARS UNDER THE WAR DEPARTMENT, 1929-1932

It had become customary for Commission personnel to use the early spring to inspect various routes and make recommendations for improvements. Donald MacDonald, a Commission engineer, reported on the condition of the winter trail from Chatanika to Fort Yukon in February, 1929. There were two sections of the trail, one leading from Chatanika to Circle, and from the latter point to Fort Yukon.

The Chatanika Winter Trail

The Chatanika winter trail originated at the little mining community by the same name, situated on the Steese Highway. It followed the highway to Mile 45, about 17 miles from Chatanika, crossed the river by the same name to the winter trail on the left limit of the river and went along the old winter trail to Sourdough Creek at Mile 66.5, some 38.6 miles from Chatanika. The winter trail then again followed the Steese Highway to an Alaska Road Commission tent cache at Mile 82.6. Since the Steese Highway drifted over with snow, at this location, the winter trail avoided this difficulty and dropped into McManus Creek, followed it to its head, and climbed up the McManus 12 mile Divide. From here it followed the highway for a short distance along the divide, and then dropped down to the head of the North Fork and to the old Twelve Mile Roadhouse. It joined the highway again at Mile 88, followed it to Mile 102, and then left it again to avoid the deep snow drifts on Eagle summit. It followed Eagle Creek to its head and then crossed the Eagle Summit about 1.5 miles east of the highway. The trail descended to Miller and Mammoth Creeks and intercepted the Steese Highway again at Mile 89.5. From here it followed the highway to Mile 162.5 at Circle on the Yukon River.¹

While there were some rough spots along the winter trail, MacDonald considered it unwise to spend any funds on improvements because of the slight winter traffic. With the completion of the Steese Highway to

Circle, all residents with access to the road made every effort to ship supplies in the late fall before the highway closed for the winter. In addition, Fairbanks citizens had asked that the mail for the district be carried by plane during the winter months, thereby eliminating expensive delivery by dog sled. He proposed, however, that a relief cabin and stable be built at the junction of the highway and winter trail at Mile 82.6. Travelers used the highway over Twelve Mile Summit up to December 15 in most winters. If more snow fences were put in, MacDonald reasoned, the highway over the summit could probably be used throughout the winter in an ordinary year. There was a relief cabin opposite Mile 85 at the foot of Twelve Mile Summit, but it was located about 300 feet from the trail and not easily seen. MacDonald pointed out that the proposed relief cabin and stable could be a real life savers, because violent winds and blizzards often closed Twelve Mile Summit and shelter then became absolutely necessary.²

Eagle Summit Hazardous

Eagle Summit, MacDonald continued, was notorious throughout the interior for the hazards it presented to winter travelers. Blizzard and wind conditions here were worse than on Twelve Mile Summit. A five feet wide trail cut into the side hill on the north side of the summit for a distance of about 2,000 feet made this stretch very dangerous. The slightest winds blocked the trail, and it frequently had happened that in a blinding blizzard travelers had slipped into a deep gulch on the west side of the trail. MacDonald proposed that the Commission widen the trail to eighteen feet, and also install a telephone in a suitable shelter at the summit. The Rasmussen telephone line already passed the summit at this point, so the improvement would be inexpensive, involving only the purchase of a telephone and the construction of a shelter for the instrument. This would allow travelers to summon aid when necessary.³

A Few Miles of Telephone Lines

Telephone lines extended from Fairbanks to Mile 70 of the Steese Highway. The Fairbanks Exploration Company owned the line from Chatanika to Mile 70. Another telephone line ran from Circle to Mile 106, owned by a Mrs. Rasmussen of Circle. Thus there existed a 36 mile gap, and residents along the road had repeatedly requested that this distance be bridged. In fact, they had volunteered the labor cost of construction and winter maintenance if the Commission paid for the phones, lines and tripods. MacDonald estimated that these materials would cost about \$2,000. He recommended that the expenditure be made because not only would it serve the public but the Alaska Road Commission as well.⁴

Trail From Circle To Fort Yukon

The second part of the trail extended from Circle to Fort Yukon. It had been built in 1924 to avoid the dangerous ice conditions of the Yukon River trail which followed the bends and turns of the river channels. It was unnecessarily long and difficult to follow. The 1924 trail consisted of a series of long tangents ranging from two to fourteen miles. It took advantage of all existing shelter, and had reduced the distance from 85 to 67 miles. From Circle the trail headed in a straight line through some light timber and wide open spaces to the first shelter cabin, some 20.5 miles from Circle. The open windy stretches, and grass clumps and swampy conditions made this the most difficult part of the trail. The second shelter cabin was 33 miles from Circle, and the third some 47.5 miles on a slough of the river. At Mile 45.5 the trail left the land and followed sloughs to the main channel of the Yukon and then into Fort Yukon. The last part of the trail, past the third cabin, changed yearly with the river. MacDonald had inspected the trail because residents for Fort Yukon had petitioned the Commission to have the trail widened and raised to double ender standards. MacDonald estimated that the requested improvements would cost \$4,700, unwarranted by the weekly mail carrier, a few passengers and the transportation of furs.⁵

MacDonald recommended, however, that the Commission build a shelter cabin ten miles out of Circle in the open flats where strong winds and snow drifts rendered travel difficult and slow. In fact, the mail carrier and several other travelers "have had to Siwash at or near this point and several times men have arrived in Circle in dangerously exhausted condition."⁶

Inspecting the Richardson Highway

Personnel of the Commission also inspected the Richardson Highway, the most highly developed transportation link in the territorial system which the Commission had constructed. By 1929, it had developed into a 371 mile long gravel-surface wagon and automobile road, connecting Valdez and Fairbanks. There were two main branches, the Chistochina, then under construction which was designed to give access to the highly mineralized Shushanna area located north of the Wrangell mountains. The Chistochina road branched off at mile 128 at Gulkana. The Edgerton Cutoff branched off at mile 92.4 at Willow Creek and connected the Richardson Highway with Chitina, and little tow located 39 miles away at Mile 131 of the Copper river and Northwestern Railway. The latter originated at the seaport of Cordova and ran to the Kennecott copper mines situated to the south of the Wrangell mountains.⁷

Development of the Richardson Highway

The Richardson Highway, the Commission pointed out, was still in a development status. The Commission had completed the route as a winter sled road in 1907, and by 1913 upgraded it to a wagon road. After World War I the Commission had worked diligently to improve the road to automobile standards. As a result, in certain newly improved sections, thawing, ground settlement and drying were still incomplete. Those sections, as a result, had an unfinished appearance. Still, much had been accomplished since 1920. Almost all the steep grades had been eliminated, most of the narrow places widened, bridges and culverts rebuilt, soft spots drained

and graveled, and dangerous stretches had either been removed, fenced, or properly marked with standard United States highway warning signs⁸.

Funds Expended On The Richardson Highway

In twenty-five years of operating in Alaska, the Commission had expended \$6,158,000 on the Richardson Highway. Of this sum, \$2,842,000 had been spent on construction and \$3,316,000 for maintenance and improvements for an average total per mile cost of about \$15,900. In 25 years the Commission had \$14,400,000 available for its Alaskan work. It spent 43 percent of that amount on the Richardson Highway. In short, the Commission now attempted to place the entire highway on a purely maintenance basis, and in 1929 only 20 percent of the route required more than annual maintenance.⁹

The Kuskokwim District

The Richardson Highway had opened the areas adjacent to it for settlement and development. The Kuskokwim district, where Commission headquarters were located at Takotna, comprised the most inaccessible parts of Alaska, including the Kuskokwim River valley, extending eastward along the coast to Bristol Bay and west as far as the Yukon River. It thus included the valleys of the Iditarod and Innoko Rivers. The chief mining operations were centered about Iditarod, Takotna, and Ophir. Although the Commission had constructed shelter cabins, aviation fields, and the Yukon-Kuskokwim portage, the remoteness of the district and high costs had prevented the building of any through wagon or automobile routes. Freight destined for Takotna and vicinity reached Bethel by ship from Seattle. Reloaded on river boats, it was shipped from there to the communities along the Kuskokwim River. Goods for Iditarod and environs went by ship from Seattle to Seward, and then via the Alaska Railroad to Nenana. Reloaded on railroad-owned river boats, supplies then were shipped to Holy Cross. There they were unloaded once again into smaller craft and sent up the Innoko and Iditarod Rivers. There were two important

winter trails, one via McGrath, Telida, Diamond, Knights to Kobi or Nenana, and another one extending from McGrath to Aniak, Bethel, Goodnews Bay, Togiak, Dillingham, and Naknek to Kanatak.¹⁰

Superintendent C. F. Lottsfeldt

C. F. Lottsfeldt occupied the position of superintendent for this far-flung district. It was his responsibility to determine the need for roads connecting mining operations with supply centers. Miners had proposed the construction of a ten mile wagon road between Cripple and the Cripple Mountain District. Lottsfeldt traversed the route and reported two dragline and two hydraulic operations at work, making the location one of the most active mining areas in the district, employing twenty-three men. Summer transportation to the mines was impossible because of the 3.5 miles of swampy tundra encountered when leaving the town of Cripple. Even pack horses, he observed, had a difficult time reaching the camps because of the swamp. Lottsfeldt recommended the construction of the road, estimating that it would cost \$5,000 per mile, or \$50,000 for the whole project. Since both the Takotna-Ophir and Iditarod-Flat roads were on a maintenance basis, practically the entire funds for his district could be allocated for this new project. He suggested that \$30,000 be made available the first year, and the other \$20,000 for the second year.¹¹ The Commission, however, found that the mining activities did not warrant the expenditure of \$50,000.

The Eagle District

In the meantime, J. G. Christianson, a military member of the Commission, examined the transportation system and resources of the Eagle area. He observed that Eagle was a dying town. Only a substantial goldstrike could revive the town, but the prospects for such a discovery were slight. Eagle had a population of 50 whites, the 40 mile District had 125, and the 70 mile District only 20 residents. The average age of the men and women in the district was approximately 60 years. Christianson

reported that "the chief industry seems to be the holding of claims of low-grade placer ground and hoping that some day someone may come who will buy their claims, and many are still waiting after 30 years of such hoping."¹²

Imports and Exports

The district imported about 200 tons of supplies annually and exported furs and gold. Eagle received 55 tons, the 40 mile District 125 tons, and the 70 mile District 20 tons. John B. Powers, a teamster, handled about 90 percent of the freight. He had 15 horses and mules, and about 40 buildings scattered over the district. Powers had the mail contract which called for three monthly trips. Christianson predicted that if Powers should go out of business it would deal the death blow to the district because there was nobody with enough capital to replace him. Powers, in fact, was the "only real user" of the road and trail system which the Alaska Road Commission had built and maintained. Some supplies, he reported, moved into the district avoiding Eagle altogether. Dropped off in Canada at the confluence of the 40 Mile River with the Yukon River, miners picked up the goods and sledged them up the 40 Mile River. In fact, the mine at Walker's Fork, the largest in the district employing 25 men, received its supplies directly from Dawson.¹³

Mines In The Eagle District

Christianson also listed the mining locations. As preciously noted, the biggest operation in the 40 Mile District was at Walker's Fork which used both dragline scraper and hydraulics. There also were smaller operations at Chicken Creek, Jack Wade, Dome and Moose Creeks, and Discovery Fork. At several other placers he observed mining operations run singly or by two men. In the 70 Mile District, small placer mines operated at Crooked, Broken Neck, Bryant, Fox, and Alder Creeks. Christianson pointed out that, although considerable quantities of low grade placer ground existed, to really profitably utilize them required modern ma-

chinery. This, in turn, necessitated capital which was in short supply. In conclusion, he stated that the Commission intended to spend \$2000 in the 70 Mile and \$4500 in the 40 Mile Districts for the 1929 season. Considering the low freight volume moving over the roads and trails each year, the Eagle District received a generous allotment of road funds for the season.¹⁴

Never Enough Funds

Unfortunately, Congress never appropriated the funding level which the Alaska Road Commission desired. As already mentioned, the Commission, in cooperation with the governor of Alaska, the Territorial Board of Road Commissioners and other interested federal and territorial officials had submitted to Congress a long-range program of operations in 1920. It had proposed three types of work in order of their priority: first, the construction of approximately 700 miles of arterial or feeder highways principally following old routes, at an estimated cost of \$7 million; second, the building of development road where most needed, at a cost of about \$1 million; third, the maintenance of the existing road and trail system at a ten-year cost of approximately \$2 million. This brought the total cost for the ten year period to \$10 million.¹⁵

For the first five years of the program, however, Congress had appropriated less than half the estimates. Of this sum, three-fourths had been required for maintenance and repairs. In 1924, the Commission revised its 1920 ten year program. For the next five years, it requested \$4,350,000 for the maintenance and improvement of 9,736 miles of existing routes, and \$1,735,000 for the completion of projects already underway. It requested another \$1,780,000 for the completion of projects already approved but not yet undertaken, and another \$1,135,000 for constructing transportation components likely to arise with economic development during the next five years. In short, the Commission requested a total of nine million dollars for the five year period, but Congress appropriated only \$4,325,000 for a short-fall of \$4,675,000.¹⁶

New Ten Year Program

Finally, the Commission submitted a new ten year program which was to become effective in fiscal year 1932. For maintenance and improvements it asked for \$9,047,000, and another \$7,500,000 for new construction for a total outlay of \$16,547,000. Of this amount, the Commission asked Congress to appropriate \$15,547,000, and the territorial legislature to contribute \$1,000,000.¹⁷

The War Department advised the Alaska Road Commission next that it needed to prepare yet another expenditure projection and submit it to the Federal Employment Stabilization Board in accordance with the Employment Stabilization Act of 1931. A six year program, from 1933 through 1938, it asked for \$740,000 for maintenance and improvements and \$290,000 for new construction in 1933 for a total of \$1,030,000. For the next five years, from 1934 through 1938, it asked for \$650,000 for maintenance and improvements and \$480,000 for new construction for each year for a total annual federal budget of \$1,230,000, or for a six year total of \$7,180,000.¹⁸

1932 Annual Report

In 1932, before the transfer of the Alaska Road Commission from the War Department to the Department of the Interior, Commission members proudly issued their annual report celebrating 28 years of service to the Territory. It had built and maintained 1,701.5 miles of wagon and tram roads, most suitable for automobile travel; 1,495.5 miles of winter sled road, 7,322 miles of trail and 712 miles of flagged trail. This had been accomplished at a total cost of \$18,015,848.47, of which \$9,393,369.68 went for new construction and \$8,622,478.49 for maintenance and improvements. The Commission had expended a total of \$18,312,825.40 of which \$12,694,859.28 Congress had appropriated. Some \$5,617,966.12, or over 30 percent of the total had come from territorial sources.¹⁹

New Equipment

Over the years, the Commission had acquired many pieces of mechanical equipment, and was now able to handle engineering construction anywhere in the territory. The equipment included the following:

- 3 graders, motor
- 1 shovel, three-eighths-cubic yard, gasoline
- 3 scrapers, automatic, tractor drawn
- 1 hoist, for attachment to "30" tractor
- 2 auto trucks, Dodge
- 145 auto trucks, Ford
- 27 auto trucks, G.M.C.
- 1 auto truck, Pierce Arrow
- 1 auto truck, White
- 9 boilers, steam
- 1 boiler, pile driver
- 2 cars, gasoline section
- 11 cars, roller bearing push
- 4 compressors, air, portable
- 2 crushers, stone
- 1 drum, hoisting
- 21 drags, road
- 2 ditches, road
- 1 engine, donkey
- 6 engines, hoisting
- 37 graders, road, tractor drawn
- 12 graders, road, horse drawn
- 10 graders, motor
- 11 hoist, Allison, for attachment to Fordson tractor
- 1 hoist, double drum for attachment to "30" tractor
- 11 jack hammers
- 7 levels, surveying
- 1 loader, belt, conveyor, portable
- 2 locomotives, gasoline
- 2 machines, mowing, horse drawn
- 6 machines, mowing, tractor drawn
- 12 maintainers, tractor drawn
- 5 pile drivers, complete
- 50 plows and 3 plows, reversible back-filler attachment for "30" tractor
- 1 plow, snow, lateral rotary type
- 8 rollers, road
- 7 saws, power driven
- 1 sawmill, portable
- 1 scarifier
- 51 scrapers, slip
- 5 scrapers, wheel, 1 scraper, self-loading, tractor drawn

11 scrapers, Fresno
28 scrapers, automatic, tractor drawn
11 shovels, three-eighths-cubic-yard, gasoline
47 sleds, bole
30 tractors, caterpillar "30"
4 tractors, caterpillar "60"
2 tractors, monarch "35", 1 tractor, Holt
1 tractor, Case, 3 tractors, Fordson
28 trailers, highway, 2 trailers, crawler type
9 transits, surveying
63 wagons, 5 welding outfits, 13 windres, hand.

Added Responsibilities

Over the years, the War Department added to the responsibilities of the Commission. For example, effective April 1, 1921, the office of the Chief of Engineers created the Alaska Engineer District. The Chief of Engineers appointed the president of the Commission district engineer, and placed the two other Commission members under the orders of the district engineer. The Commission's secretary and disbursing officer also became disbursing officer of the district. As a part of North Pacific division, the district engineer rendered an annual report of the operations of the Alaska district to the Chief of Engineers.²¹

Congress and the War Department also directed the president of the Commission to direct the construction or repair of any aid to navigation, authorized by Congress in the sixteenth lighthouse district which included Alaska. By an informal agreement, the president of the Commission agreed to act for the National Park Service, Department of the Interior, on certain matters relating to the improvement of the Sitka National Monument and the development of Mount McKinley National Park. This agreement became effective on April 1, 1922. In addition, the territorial government requested the president of the Commission to supervise a variety of territorial public works such as the construction of roads, aviation fields, shelter cabins, telephone lines, flood protection and terminals. The duties and responsibilities kept piling up. The Quartermaster General

of the Army requested the Commission to disburse funds and generally supervise the administration of the Sitka National cemetery, created by executive order of June 12, 1924, and at the request of the commanding general of the Ninth Corps Area, the Alaska Road Commission had built a water supply system for Chilkoot Barracks, the only Army post in Alaska. The Commission, on behalf of the Federal Power Commission, supervised and inspected hydroelectric developments in the territory; and finally, in conformance with an act Congress had approved on May 15, 1930, the president of the Alaska Road Commission was appointed a member of the Commission for studying the possible construction of the Pacific-Yukon Highway to connect the northwestern part of the United States with British Columbia, Yukon Territory, and Alaska.²²

Smooth Cooperation Among Bureaus

In short, over the twenty-eight year history of the Alaska Road Commission there had developed, without legislation, but through executive orders and interdepartmental and interbureau agreement, a harmonious working arrangement utilizing the facilities of all the organizations involved interchangeably. The Commission, however, kept a careful account of all funds so that each appropriation was eventually expended according to Congressional intent, and no appropriation was either increased nor diminished by such interchange of working funds or facilities. The Commission prepared separate accounts and reports to the departments under whose direction they performed the work. This coordination had made possible the economical construction of many public works without the expenditure of a large overhead. Had each organization acted independently, there would have been the expenditure of substantial overhead funds.²³

Activities In 1932

In 1932, the Alaska Road Commission conducted the following activities under its consolidated engineering direction: The construction,

repair, and maintenance of federal roads, tramways, ferries, bridges, trails, and related works, in excess of 11,000 miles, and extending from year-around open ports on Alaska's south coast to all inhabited parts of the territory; territorial roads, bridges, ferries, aviation fields, telephone lines, and trails throughout Alaska, covered by cooperative agreements; shelter cabins; the seventy-four miles long Nome-Shelton tramway. Either engines or dogs pulled the tramway cars. There also was the Valdez Dyke, the Yukon-Kuskokwim portage, and the government float in Juneau. ²⁴

Improvements Accomplished

The Alaska Road Commission also had made improvements at the following location: Nome Harbor, Port Alexander, and Harbor of Refuge and Seward Harbor; it had conducted preliminary surveys or examinations of Sitka Harbor, Dry Pass, Nome Harbor; Egegik River, Kake Harbor, Stikine River, Petersburg Harbor, Keku Strates; Kodiak, Wrangell, and Craig, Harbors; it had built flood control devices on the Salmon River; and issued permits for fish traps and other structures in the navigable waters along Alaska's 26,000 mile long coast; it had improved the Sitka National Monument and maintained various aids to navigation. Also, larger available funds allowed purchase consolidation for supplies resulting in lower prices, and combined operations avoided conflicts in plans and work compilations. Very importantly, having funds available on a year-round basis avoided the difficulties resulting from fiscal year appropriations beginning or terminating about the middle of each working season. All of this made the operations much more flexible and responsive to local needs.²⁵

Aviation

Alaskans had enthusiastically embraced aviation, largely because of the territory's huge size and difficult geography, and scarcity of other transportation needs. To keep pace with aviation developments, therefore,

the territorial legislature, since 1925, had authorized the expenditure of a portion of the territorial road funds for the construction of aviation fields. The Alaska Road Commission built these airfields under the existing cooperative agreement with the territory. By 1932, some seventy of these airfields had been constructed at a total cost of \$173,243.47. Some figures illuminated the importance of Alaskan aviation during the last fiscal year:

Planes in service.....	31
Plane miles.....	742,854
Passengers carried.....	6,637
Passenger miles.....	942,176
Mail and express carried.....	496,680 lbs.

A summary of the work the Commission had accomplished by 1932 follows:

Consolidated cost summary

No.	Subproject	Cost, 1932	Total cost to June 30, 1932	Cost maintenance and improvement 1932	Total cost maintenance and improvement to June 30, 1932	Cost construction, 1932	Total cost construction to June 30, 1932
1	Prince of Wales Island ¹		\$63,850.26		\$21,038.40		\$42,811.86
2A	Auk Bay extension ¹		60,404.43		12,300.30		48,104.13
2B	Mendenhall Glacier extension ¹		15,150.21		7,644.57		7,505.64
2C	Eagle River extension ¹		18,362.32		3,360.00		15,002.32
2D	Juneau-Duck Creek ¹		109,658.27		31,250.55		78,407.72
2E	Gastineau Channel Bar	\$240.00	30,007.83	\$240.00	1,386.00		28,621.83
2F	Gold Creek Bridge, Juneau		2,156.75				2,156.75
2G	Alaska Juneau Mine Trail		831.66				831.66
2H	Juneau Wharf	275.01	30,967.53	275.01	751.01	751.22	30,216.31
2J	Juneau Float	45.38	5,179.80	45.38	45.38		5,134.42
3A	Haines-Wells	6,044.27	243,206.34	6,044.27	119,576.35		123,629.99
3B	Pleasant Camp extension	5,685.68	170,710.20	5,685.68	28,516.00		142,194.20
3C	Porcupine extension		47,534.63		9,279.73		38,354.90
3D	Haines-Mud Bay	115.75	32,064.29	115.75	13,256.83		18,807.46
3E	Haines-Chilkoot	116.14	20,224.86	116.14	1,988.30		18,236.56
3F	Haines-Jones Point	34.75	2,353.20	34.75	799.75		1,553.45
3G	Chilkoot Barracks water supply	28,344.60	28,344.60			28,344.60	28,344.60
3H	Chilkoot Barracks Road	1,252.50	1,252.50	1,252.50	1,252.50		
4A	Donnelly-Washburn ²		33,460.05		14,594.66		18,865.40
4AA	Richardson-Democrat Creek		2,320.59				2,320.59
4AB	Donnelly Aviation Field	14.11	137.42	14.11	14.11		123.31
4BA	Valdez-Ptarmigan drop	44,030.24	1,067,894.63	44,030.24	597,338.08		470,556.55
4BA	Dyke	27,123.68	119,100.36	27,123.58	63,034.38		56,065.98
4BB	Ptarmigan Drop-Ernestine	9,424.92	451,562.55	9,424.92	280,334.99		171,227.56
4C	Ernestine-Willow Creek	4,491.07	363,086.10	4,491.07	185,586.25		177,499.85
4D	Willow Creek-Gulkana	17,270.64	606,055.01	17,270.64	359,660.43		246,394.58
4E	Gulkana-Sourdough	17,436.24	384,036.25	17,436.24	239,862.55		144,173.70
4F	Sourdough-Mile 168	20,712.18	324,881.94	20,712.18	188,623.65		136,258.29
4G	Mile 168-Delta River	19,963.90	538,024.51	19,963.90	379,408.62		158,615.89
4H1	Delta River-Rapids	40,465.49	723,227.62	40,465.49	463,262.02		259,965.60
4H2	Rapids-Grundler	35,089.23	403,186.04	35,089.23	282,799.92		120,386.12
4I	Grundler-Richardson	949.01	345,806.87	949.01	224,512.87		121,294.00
4J	Richardson-Salchaket	2,919.89	448,286.96	2,919.89	232,768.95		215,518.01
4JA	Lake Harding Road	15.73	5,068.96	15.73	1,968.21		3,100.75

Cost consolidated summary - Continued

Consolidated cost summary - Continued

4K	Salchaket-Fairbanks-----	\$12,040.75	\$548,781.48	\$12,040.75	\$293,818.61	-----	\$254,962.87
4KA	Salcha Bridge-----	4,555.65	81,206.87	4,555.65	30,836.20	-----	50,370.67
5	Ester-Dunbar ² -----		19,405.18	-----	6,781.00	-----	12,624.18
5A	Dunbar-Tanana-----	749.31	89,182.74	749.31	38,913.05	-----	50,269.69
5B	Nenana-Campbells-----		2,025.61	-----	106.60	-----	1,919.01
5C	Fish Lake-American Creek-----		\$7,501.43	-----	\$1,734.90	-----	\$5,766.53
5D	American Creek Aviaton Field-----		940.00	-----		-----	940.00
5E	Tanana Aviation Field-----	189.76	4,274.92	189.76	374.96	-----	3,899.96
5F	Illinois Creek-MoranCreek-----		1,178.89	-----		-----	1,178.89
6A	Willow Creek-Tonsina-----	3,783.70	229,458.59	3,783.70	119,797.81	-----	109,660.78
6B	Tonsina-Chitna-----	13,794.13	353,827.21	13,794.13	208,464.52	-----	145,362.69
6D	Chitina Depot-----	147.89	14,600.78	147.89	2,662.12	-----	11,938.66
6E	Chitina native school-----		599.66	-----	104.60	-----	495.06
6F	Lower Tonsina Aviation Field-----		1,587.15	-----		-----	1,587.15
6G	Copper Center Aviation Field-----	9.09	276.92	9.09	76.33	-----	200.59
6H	Chitina Aviation Field-----		110.85	-----		-----	110.85
7A	Summit-Chatanika-----	4,318.49	80,508.40	4,318.49	39,745.69	-----	40,762.71
7AA	Cleary Creek-----	186.81	8,375.56	186.81	4,057.75	-----	4,317.81
7B	Fox-Olnes-----	1,009.87	50,809.91	1,009.87	22,718.26	-----	28,091.65
7BA	Dome-Spaulding Mine-----		3,220.31	-----	380.94	-----	2,839.37
7BB	Fox-Steel Creek-----		855.75	-----		-----	855.75
7C	Summit-Fairbanks Creek-----	2,103.27	53,254.89	2,103.27	28,352.28	-----	24,902.61
7CA	Summit-Fish Creek-----	199.76	16,561.15	199.76	3,780.33	-----	12,780.82
7D	Ester Creek-----	3,131.49	85,005.60	3,131.49	46,348.67	-----	38,056.93
7DA	College Spur-----	28.25	1,391.52	28.25	861.52	-----	530.00
7DB	Ester-Dome-----	8.50	4,683.31	8.50	490.58	-----	4,192.73
7DC	St. Patricks-Happy-----	231.71	7,116.57	231.71	1,047.10	-----	6,069.47
7DD	Ester-Beegler-----	10.28	1,010.28	10.28	10.28	-----	1,000.00
7E	Vault Creek ¹ -----		4,875.20	-----	172.37	-----	4,702.83
7F	Vault Creek-Treasure Creek ¹ -----		1,379.09	-----	29.09	-----	1,350.00
7G	Fairbanks-Gilmore-----	17,267.67	183,377.92	17,267.67	112,975.17	-----	70,402.75
7GA	Lazelle Road-----	171.42	6,024.96	171.42	1,911.45	-----	4,113.51
7H	Little Eldorado Creek-----	9,778.20	21,826.89	9,778.20	13,248.58	-----	8,578.31
7I	Gilmore-Summit-----	7,867.30	54,187.23	7,867.30	35,023.91	-----	19,163.32
7IA	Gilmore Creek ² -----		1,562.00	-----		-----	1,562.00
7J	Fairbanks-Chena Hot Springs---	814.42	17,618.57	814.42	9,585.98	-----	8,032.59
7JA	Chena River Branch-----	181.72	1,653.37	181.72	1,039.36	-----	614.01
7JB	Palmer Creek Aivation Field---	14.11	839.11	14.11	264.11	-----	575.00
7JC	Colorado Creek-South Fork-----		600.00	-----		-----	600.00
7K	Olnes-Livengood-----	37,926.59	52,917.46	-----	2,170.39	\$37,926.59	50,747.07
7N	Farmers-Birch Hill-----	776.71	25,414.36	776.71	11,012.39	-----	14,401.97

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7NA	Isabelle Creek-----		\$2,484.38	-----	\$809.38	-----	\$1,675.00
7NB	Ballaine-Rickert-----		1,926.76	-----	126.76	-----	1,800.00
7R	Goldstream-O'Connor Creek-----	\$399.00	553.64	\$399.00	399.00	-----	154.64
7S	Graehl Bridges-----	459.47	4,894.79	469.47	1,844.43	-----	3,050.36
7T	Farmers-Chena Slough-----	1,496.27	17,097.31	1,496.27	5,898.54	-----	11,198.77
7V	Fairbanks, wireless-----		495.46	-----	495.46	-----	
7X	Chena Hot Springs Aviation Field-----		1,739.58	-----	50.00	-----	1,689.58
7Y	Fairbanks Aviation Field-----	14.11	19,969.33	14.11	498.11	-----	19,471.20
7Z	Fairbanks Aviation Field Road-----		766.65	-----		-----	766.65
8	Nome-Council-----	10,593.80	422,411.60	10,593.80	243,028.64	-----	179,382.96
8D	Council-Ophir Creek-----	1,195.68	7,804.82	1,195.68	7,804.82	-----	
8H	Casa de Paga-----	175.50	32,357.27	175.50	14,917.62	-----	17,439.65
8J	Shovel Creek-----		66.55	-----	8.05	-----	58.50
8K	Council Aviation Field-----	845.03	2,244.27	845.03	845.03	-----	1,399.24
8L	Port safety aids-----	120.00	616.50	120.00	616.50	-----	
9	Rampart-Eureka-----	1,091.92	52,312.66	1,091.92	23,198.30	-----	29,114.36
10	Seward-Kenai Lake ¹ -----		80,783.93	-----	34,523.10	-----	46,260.83
10A	Seward-Radio ¹ -----		5,594.04	-----	124.00	-----	5,470.04
10B	Seward-Nash ¹ -----		21,996.00	-----	8,753.70	-----	13,242.30
10C	Lowell Creek flood control-----	701.71	124,663.54	701.71	11,424.92	-----	113,238.62
10D	Seward Aviation Field-----	286.77	10,343.61	-----	245.75	\$286.77	10,097.86
11A	Eagle-Liberty-----	7,237.00	119,083.46	3,507.09	65,660.91	3,730.00	53,422.55
11B	American Summit-Forty Mile-----	345.50	26,945.31	345.50	6,694.12	-----	20,251.19
11C	Steel Creek, mouth of Walkers Fork	638.90	8,499.06	638.90	3,866.56	-----	4,632.50
11D	Steel Creek-Walkers Fork-----	249.50	6,446.20	249.50	2,336.20	-----	4,110.00
11E	Eagle-Seventy Mile-----	746.89	20,385.89	746.89	15,421.30	-----	4,964.59
11F	Liberty-Chicken-----	1,815.55	17,439.74	1,815.55	13,425.47	-----	4,014.27
11G	Steel Creek-Canyon Creek-----		914.00	-----	914.00	-----	
11J	Forty Mile-Chicken-----		44.75	-----	44.75	-----	
11K	Forty Mile-Steel Creek-----		80.00	-----	80.00	-----	
11L	Franklin-Chicken-----	117.00	1,843.75	117.00	1,843.75	-----	
11M	Jack Wade-Walkers Fork-Boundary	165.87	290.87	165.87	290.87	-----	
11N	Lilywig Creek-----		909.50	-----		-----	909.50
11P	Chicken Aviation Field-----	49.00	2,749.14	49.00	49.00	-----	2,700.14
11Q	Eagle Aviation Field-----	443.48	2,762.98	443.48	742.23	-----	2,020.75
12A	Mile 34-Lynx Creek ² -----		22,192.66	-----	8,239.03	-----	13,953.63
13A	Nome-Bessie-----	918.43	86,629.09	918.43	48,087.14	-----	38,541.95
13B	Bessie-Snake River-----	5,127.84	82,475.02	5,127.84	52,941.90	-----	20,533.12
13BA	Snake River-Monument Creek-----	371.38	1,788.05	371.38	371.38	-----	1,417.27
13C	Bessie-Sunset Creek-----	16,674.63	36,414.10	1,242.00	15,141.82	15,432.63	21,272.28
13D	Bessie-Dry Creek ¹ -----		3,280.20	-----	1,706.73	-----	1,582.47
13E	Dry Creek-Newton ² -----		523.74	-----	223.86	-----	399.88
13F	Nome-Osborne-----	187.21	56,827.92	187.21	41,434.13	-----	15,393.79

Consolidated cost summary - Continued

13G	Grass Gulch ² -----	\$1,125.73	-----	\$338.94	-----	\$786.79
13H	Center Creek ² -----	1,538.80	-----	1,455.15	-----	83.6
13J	Wonder-Flat Creek ² -----	2,803.72	-----	2,633.22	-----	170.50
13K	Bessie-Buster----- \$563.89	53,836.81	\$583.89	36,332.83	-----	17,503.98
13L	Nome buoys-----	585.00	-----	585.00	-----	-----
13M	Nome Depot----- 307.22	4,832.42	307.22	4,832.42	-----	-----
14	Sitka-Indian River ¹ -----	9,610.88	-----	3,336.16	-----	6,274.72
14	Sitka-Indian River----- 129.15	6,771.76	129.15	3,208.76	-----	3,563.00
14A	Sitka National Monument----- 1,291.69	12,196.08	1,291.69	10,646.08	-----	1,550.00
14B	Sitka National Cemetery----- 1,072.33	9,233.02	1,072.33	5,733.02	-----	3,500.00
14C	Sitka-Pioneer Cemetery Road--- 45.00	4,399.16	45.00	1,058.14	-----	3,341.02
14D	National Cemetery Road----- 200.41	1,993.30	200.41	1,195.83	-----	697.47
15	Circle-Miller House----- 25,591.20	583,981.73	13,330.20	151,293.70	\$12,261.00	432,688.03
15A	Central House-Circle Hot Springs 884.52	32,181.54	884.52	9,680.84	-----	22,500.70
15B	Central House-Deadwood----- 8,160.92	12,051.88	-----	-----	8,160.92	12,051.88
15C	Circle Hot Springs Aviation Field 64.11	1,702.21	64.11	385.71	-----	1,316.50
15D	Leech cut-off-----	224.75	-----	-----	-----	224.75
15E	Miller House spur----- 206.05	2,206.22	206.05	335.69	-----	1,870.53
16	Chatanika-Miller House----- 98,687.12	752,743.38	41,160.00	217,134.87	57,527.12	535,608.51
16A	U.S. Creek Branch----- 706.81	12,362.79	706.81	1,990.66	-----	10,372.13
16B	Eagle Creek spur-----	306.03	-----	224.86	-----	81.17
16C	Chatanika-Miller House (winter) 71.78	23,262.11	71.78	8,647.37	-----	14,614.74
16D	Sourdough Creek Branch----- 206.29	2,970.41	206.29	206.29	-----	2,764.12
17	Tanana-Kaltag----- 386.40	34,235.33	386.40	10,497.53	-----	23,737.80
17A	Lewis Landing-Dishkaket ² -----	483.37	-----	-----	-----	483.37
17B	Nulato-Dishkaket ² -----	735.88	-----	250.00	-----	485.88
17C	Nulato Aviation Field----- 14.13	5,026.02	14.13	14.13	-----	5,011.89
17D	Tanana-Kaltag telephone line-----	6,683.59	-----	6,683.59	-----	-----
18	Kaltag-Nome----- 1,758.09	70,535.17	1,758.09	42,397.78	-----	28,137.39
18A	Bonanza-Kotzebue----- 717.94	9,741.30	717.94	8,511.30	-----	1,230.00
18B	Golovin-Council----- 13.09	386.94	13.09	386.94	-----	-----
18D	Unalakleet Aviation Field----- 571.90	1,641.17	171.90	199.50	400.00	1,441.67
18E	Solomon Aiviaton Field----- 267.55	719.83	267.55	624.83	-----	95.00
18F	Golovin Aviation Field----- 167.80	1,751.97	167.80	172.90	-----	1,579.07
18G	Moses Aviation Field-----	254.20	-----	29.20	-----	225.00
18H	Kaltag-Unalakleet telephone line-----	2,454.00	-----	2,454.00	-----	-----
18J	Spruce Creek-----	287.50	-----	-----	-----	287.50
19	Kern Creek-Knik ² -----	13,891.95	-----	3,615.73	-----	10,276.22
19A	Kenai Lake-Kern Creek ² -----	6,833.20	-----	-----	-----	6,833.20
19B	Mile 27, mile 29, A. N. R. R. ² -----	741.66	-----	-----	-----	741.66

19C	Kenai Lake, mile 27 A. N. R. R. ²		\$1,595.81			\$1,595.81
19D	Kern Creek-Indian Creek ²		3,758.26			3,758.26
19E	Girdwood-Crow Creek ¹		3,434.15		\$2,542.50	891.65
20A	Knik-Susitna ²		8,437.44		629.59	7,807.85
20B	Susitna-Rainy Pass		32,876.98		6,598.69	26,278.29
20C	Rainy Pass-Big River		16,436.46		1,927.39	14,509.07
20D	Dishkaket-Kaltag ²		4,290.00		38.60	4,251.40
20DA	Takotna-Ophir (winter)	\$8.98	4,896.47	\$8.98	1,096.47	3,800.00
20DB	Ophir-Dishkaket		4,335.00		760.00	3,575.00
20E	Susitna-McDougal ²		8,640.21			8,640.21
20F	McDougal-Cache Creek ²		7,350.00		347.10	7,002.90
20G	Lakeview-McDougal ²		3,675.00			3,675.00
20H	Nancy-Susitna	1.00	2,773.36	1.00	2,773.36	
20J	Susitna-Tyonek	51.40	4,122.45	51.40	1,478.52	2,643.93
20K	Susitna Aviation Field		931.10			931.10
21	Unalakleet-St. Michael		8,896.33		6,293.70	2,602.63
21A	St. Michael Aviation Field		110.00			110.00
22	Hot Springs-Sullivan Creek	354.00	60,168.37	354.00	32,344.53	27,823.84
23A	Snowshoe-Beaver		14,163.03		3,227.58	10,935.45
23B	Beaver-Caro	375.45	65,198.90	375.45	34,958.00	30,240.81
23C	Big Creek		9,614.77		3,294.77	6,320.00
23D	Caro-Flat Creek	1,233.94	16,517.56	1,233.94	12,494.30	4,023.26
23E	Caro-Coldfoot		13,167.46		5,607.59	7,559.87
23F	Chandalar Aviation Field		8,335.74		120.00	8,215.74
24	Mile 29, A.N.R.R.-Sunrise ¹		57,850.94		27,123.00	30,727.85
24A	Lynx Creek-Six Mile ¹		10,882.40		3,800.00	7,082.85
24B	Sunrise-Hope ¹		1,085.00		200.00	885.00
25A	Cripple River ²		8,801.79		3,743.82	5,057.07
25B	Penny River ²		1,967.08		691.05	1,276.03
25C	Nome wireless	202.02	3,638.64	202.02	1,873.73	1,764.91
25D	Mouth of Center Creek	286.66	26,229.45	286.66	18,728.38	7,501.07
25DA	Little Creek Branch	281.50	4,078.20	281.50	281.50	3,796.70
25E	Submarine Paystreak	437.90	35,556.33	437.90	11,186.00	24,370.33
25H	Otter Creek ²		1,802.52		652.98	1,149.54
25K	Nome City Dock		2,966.65			2,966.65
25L	Nome Aviation Field		8,982.43	2,062.27	5,459.73	3,522.70
25M	Telephone lines, Seward Peninsula		13,149.20		11,449.20	1,700.00
25N	Nome city Streets		1,319.57		1,319.57	
25P	Nome Harbor lights	173.81	815.29	173.81	815.29	
25R	Radio telephones	6,477.34	6,477.34			\$6,477.34
26	Candle-Candle Creek	2,642.88	83,480.75	2,642.88	48,486.68	34,994.07
26A	Kugruk River approach ²		488.00		488.00	

Consolidated cost summary - Continued

26B	Bear Creek Trail-----		\$613.09	-----	\$273.09	-----	\$340.00
26C	Candle-Kiwalik-----		1,027.91	-----		-----	1,027.91
26D	Kiwalik Aviation Field-----	\$432.40	873.50	\$432.40	573.50	-----	300.00
26E	Candle Aviation Field-----		1,355.00	-----		-----	1,355.00
26F	Telephone line reconnaissance-----		148.00	-----	148.00	-----	
26G	Candle radio rod-----		575.00	-----		-----	575.00
27	Deering-Inmachuk-----	4,654.79	99,914.28	4,654.79	69,022.38	-----	30,891.90
27A	Deering Aviation Field-----	10.40	1,159.65	10.40	137.65	-----	1,022.00
28	Shelton-Candle-----	100.84	12,368.89	100.84	4,161.87	-----	8,207.02
28A	Nome-Serpentine Hot Springs---	2,546.36	15,994.93	2,546.36	10,755.93	-----	5,239.00
29	Tanana-Bettles-----	81.52	12,252.29	81.52	5,240.18	-----	7,012.11
29A	Bettles-Coldfoot-----	2,334.84	18,734.89	2,334.84	13,604.89	-----	5,130.00
29C	Mile 70-Hughes-----		2,167.02	-----	458.45	-----	1,708.57
29D	Wild River Trail-----		1,425.76	-----	1,425.76	-----	
29E	Bettles River Aviation Field-----		500.00	-----		-----	500.00
30	Hot Springs Landing-Eureka----	5,826.11	76,263.16	5,826.11	55,837.35	-----	20,425.81
30A	Hot Springs-Tofty-----		6,683.47	-----	2,374.21	-----	4,309.26
30B	Manley Hot Springs Aviation Field	24.98	1,189.98	24.98	49.98	-----	1,140.00
31	Caribou Creek-----		13,634.62	-----	5,053.70	-----	8,580.92
32A	Takotna-Flat (summer)-----		9,247.94	-----	3,810.65	-----	5,437.29
32AA	Takotna-Flat (via Moore Creek)	62.80	123.83	62.80	123.83	-----	
32AB	Flat-Moore Creek-----		15.00	-----	15.00	-----	
32AC	Candle Creek-Takotna-----		1,216.09	-----	1,216.09	-----	
32B	Iditarod-Flat-----	3,660.50	120,589.49	3,550.50	64,703.22	-----	55,886.27
32BA	Iditarod River improvement-----		100.00	-----		-----	100.00
32C	Ophir-Iditarod-----	53.91	7,747.26	53.91	2,747.26	-----	5,000.00
32D	Flat-Crooked Creek-----	391.78	5,932.57	391.78	4,452.57	-----	1,480.00
32DD	Flat-Georgetown-----		150.00	-----	150.00	-----	
32E	Takotna Aviation Field-----	1,479.25	3,859.87	-----	437.43	\$1,479.25	3,422.44
32F	Takotna Depot-----	3,235.01	13,064.12	3,235.01	5,454.85	-----	7,609.27
33A	Otter Creek Towpath ² -----		448.23	-----		-----	448.23
33B	Summit-Otter Creek-----		5,047.66	-----	5,047.66	-----	
33C	Flat City-Flat Creek-----	741.53	4,754.68	741.53	4,754.68	-----	
33D	Head Flat Creek-Willow Creek-	1,507.13	7,241.88	1,507.13	5,998.88	-----	1,243.00
33E	Willow Creek-Chicken Creek----	3,022.35	9,108.19	3,022.35	7,608.19	-----	1,500.00
33F	Flat City-Otter Discovery-----	3,503.62	20,665.29	1,500.00	8,850.59	2,003.62	11,814.70
33G	Candle Landing-Candle Creek-----		6,572.00	-----	975.00	-----	5,597.00
33H	Flat Aviation Field-----	223.42	3,123.42	223.42	223.42	-----	2,900.00
34	Iditarod-Dishkaket ² -----		4,830.98	-----	100.00	-----	4,730.98
34A	Flat-Holy Cross-Anvik-----	118.48	1,920.14	118.48	1,920.14	-----	
34B	Iditarod-Shageluk-Anvik-----	89.91	1,123.78	89.91	623.78	-----	500.00
35A	Archangel extension-----	296.08	31,113.28	296.08	13,915.36	-----	17,197.92
35AA	Sherry Branch-----		1,768.49	-----	649.17	-----	1,119.32

Consolidated cost summary - Continued

35AB	Fairangel extension-----		\$104.20				\$104.20
35B	Palmer-Fishhook-----	\$93.40	38,892.28	\$93.40	\$14,204.36		24,687.92
35C	Palmer-Matanuska River-----	31.17	34,702.33	31.17	11,046.17		23,656.16
35D	Willow Creek extension-----	3,190.34	108,868.29	3,190.34	70,734.15		38,134.14
35DA	Gold Chord Branch-----	179.21	11,617.49	179.21	1,026.25		10,591.24
35DB	Lucky Shot-St. Peters-----	28,544.59	54,341.28			\$28,544.59	54,341.28
35E	Wasilla-Fishhook-----	3,619.90	127,167.24	3,619.90	93,754.61		33,412.63
35F	Wasilla-Knik-----	243.98	52,346.51	243.98	25,911.04		26,435.47
35G	Palmer-Springer-----	97.82	3,173.76	97.82	1,600.44		1,573.32
35H	Wasilla-Finger Lake-Palmer----	2,110.85	36,280.38	2,110.85	17,223.15		19,057.23
35I	Moose-Palmer-----	133.95	2,520.62	133.95	627.53		1,893.09
35J	Wasilla-Matanuska-----	516.82	26,383.58	516.82	17,107.35		9,276.23
35K	Matanuska Trunk Road-----	7,419.23	47,366.38	7,419.23	32,314.92		15,051.46
35L	Palmer-Matanuska-----	345.98	15,579.65	345.98	7,174.95		8,494.70
35N	Houston-Willow Creek-----		1,212.32		272.00		940.32
35O	Fishhook-Goldmint-----	2,407.79	24,982.28	2,407.79	7,445.45		17,536.83
35P	Moose Creek-Baxter ² -----		2,218.62				2,218.62
35Q	Edlund Road-----	63.73	3,153.02	63.73	601.33		2,551.69
35R	Bogard Road-----	84.89	13,514.11	84.89	1,285.53		12,228.58
35RA	Engstrom Road-----		1,020.00				1,020.00
35S	Moose Creek Trail-----		2,118.44		77.43		2,041.01
35T	Werner connection-----		486.94				486.94
35U	Moose Creek Aviation Field-----		481.75		20.25		461.50
35V	Fishhook Aviation Field-----		917.49		68.75		848.74
35W	Wasilla Aviation Field-----		459.50				459.50
35X	Wasilla Aviation Field Road---	22.45	1,191.11	22.45	55.17		1,135.94
36	Mineral Creek-----	257.64	60,633.37	257.64	25,318.36		35,315.01
36A	Granby Road-----		3,431.35		349.44		3,081.91
36B	South Second Street, Cordova-----		3,373.15				3,373.15
36C	Eyak Lake Road ¹ -----		7,735.85				7,735.85
36CA	Cordova Aviation Field-----		941.90		15.75		926.15
36D	Valdez-Quartz Creek ² -----		524.75				524.75
36E	Valdez-Glacier ² -----		616.91				616.91
36F	Shoups Bay ² -----		3,457.25				3,457.25
37	Topkok-Candle-----		1,026.56		210.00		816.56
37A	Bluff-White Mountain-----		3,273.23				3,273.23
37B	Bluff Aviation Field-----		80.00				80.00
38A	Ruby-Long-----	10,413.65	237,807.24	10,413.65	105,786.89		132,020.35
38B	Poorman-Cripple-----	307.20	3,757.04	307.20	2,254.08		1,502.96
38C	Ophir-Cripple-----	44.15	4,001.58	44.15	2,102.58		1,899.00
38D	Ophir-Takotna-----	7,204.47	264,146.31	7,204.47	89,638.81		174,507.50
38DA	Little Creek Road-----		13,185.52		2,537.48		10,648.04
38E	Long-Poorman-----	7,588.85	158,145.17	7,588.61	40,952.61		117,192.56

Consolidated cost summary - Continued

38EE	Long-Poorman-----		\$5,378.00		\$110.00		\$5,268.00
38EEE	Tamarack-Poorman-----		22,322.69				22,322.69
38F	Poorman-Ophir-----		3,030.44		3,030.44		
38G	Takotna Aviation Field Road---	\$559.56	8,934.24		1,000.00	\$559.56	7,934.24
38H	Ganes Creek Road-----	3,515.50	14,930.71	\$3,515.50	11,526.86		3,403.85
38K	Ruby Aviation Field-----	23.76	2,098.51	23.76	898.51		1,200.00
38L	Ruby Aviation Field Road-----		500.00				500.00
38M	Ophir Aviation Field-----		1,825.12				1,825.12
39	Juneau-Sheep Creek ¹ -----		45,929.40		20,539.27		25,390.13
40	Douglas-Gastineau Channel ¹ -----		18,616.56		6,596.68		12,019.88
41	Kiana-Klery Creek-----	146.87	3,905.94	146.87	891.18		3,014.76
41A	Kotzebue-Shungnak-----	245.13	3,993.31	245.13	3,993.31		
41AA	Kiana-Selawik-Shungnak-----	791.40	791.40			791.40	791.40
41B	Kotzebue-Point Barrow-----	147.57	6,065.59	147.57	1,665.57		4,400.02
41C	Kiwalik-Noorvik-----	454.25	454.25	454.25	454.25		
41D	Kotzebue Aviation Field-----	110.40	1,955.45	110.40	537.90		1,417.55
41E	Kobuk Aviation Field-----	300.00	2,299.00			300.00	2,299.00
42	St. Michael-Kotlik-----		2,385.51		2,385.51		
43	Petersburg-Scow Bay ¹ -----		23,466.23		9,968.56		13,497.67
44	Skagway Valley ¹ -----		11,124.83		2,320.88		8,803.95
44A	Skagway Trails-----	1,899.53	17,833.41	1,899.53	6,674.70		11,158.71
44B	Skagway Aviation Field-----	263.34	7,048.87	263.34	263.34		6,785.53
45	Silver Bow Basin ¹ -----		23,466.21		17,527.59		5,938.62
46	Kobi-Eureka-----	94.74	16,437.54	94.74	3,865.91		12,571.63
46A	Roosevelt-Kantishna-----		61,686.53		19,723.84		41,962.69
46B	Lignite-Kantishna-----		13,130.00		1,163.09		11,966.91
46C	Nenana-Knights Roadhouse-----	157.30	3,651.03	157.30	2,058.45		1,592.58
46D	McKinley Park Road-----	96,237.79	721,437.38	25,194.94	87,907.28	71,042.85	633,530.10
46E	Diamond-Telida-----	69.70	10,276.40	69.70	3,464.84		6,811.56
46F	Nenana Cemetery Road-----	47.70	7,606.51	47.70	3,787.88		3,818.63
46G	Kobi-Bonnifield-----		5,767.51		69.90		5,706.61
46H	Lake Minchumina Aviation Field	14.11	914.11	14.11	164.11		750.00
46J	Kantishna Aviation Field-----		775.00		100.00		875.00
46K	Telida Aviation Field-----		850.00		250.00		600.00
46M	Nenana Aviation Field-----	65.48	1,108.04	65.48	388.04		720.00
47	Coldfoot-Wiseman-----	83.48	16,255.34	83.48	7,312.73		8,942.61
47A	Wiseman Aviation Field-----	623.33	6,434.02	623.33	2,320.77		4,113.25
47B	Nolan Branch-----	3,808.67	25,729.83	2,608.67	7,095.00	1,200.00	18,634.74
47C	Wisemann-Hammond-----	856.42	7,897.70	845.42	3,930.03		3,907.07
48	Iliamna Bay-Iliamna Lake-----	14,738.49	71,749.37	3,000.00	7,506.46	11,738.49	64,242.91
49	Davidson Landing-Taylor-----	1,518.16	19,930.25	1,518.16	12,217.08		7,713.17
50	Stilkine River ¹ -----		2,256.75				2,256.75
51	Talkeetna-Cache Creek-----	10,329.54	277,143.00	10,329.54	111,803.74		165,339.35

Consolidated cost summary - Continued

51A	Cache-Creek Trail-----		\$4,533.11	-----	\$2,283.11	-----	\$2,270.00
51B	Peters-Creek Trail-----	\$2,281.07	14,632.70	-----	2,144.81	\$2,281.07	12,487.89
51C	Yentna-Mills Creek-----		5,174.80	-----	44.36	-----	5,130.44
51E	Mills Creek-Cache Creek-----	107.22	2,253.83	\$107.22	946.38	-----	1,307.45
51F	Cache Creek Aviation Field-----		170.90	-----		-----	170.90
52	Ketchikan-Wards Cove ¹ -----		26,120.42	-----	5,000.00	-----	21,120.42
52A	Ketchikan-Charcoal Point ¹ -----		15,500.48	-----	3,000.00	-----	12,500.48
53	Eagle-Circle-----		5,816.59	-----	4,161.87	-----	1,681.72
53A	Circle-Fort Yukon-----	77.00	7,929.98	77.00	3,763.41	-----	4,166.57
53B	Fort Yukon Aviation Field-----	14.11	3,096.00	14.11	557.11	-----	2,540.00
54	Chisana-Nizina-----	337.16	10,303.37	337.16	2,976.47	-----	7,327.30
54A	Chisana Aviation Field-----		1,744.63	-----	250.00	-----	1,494.63
54B	Nabesna Aviation Field-----		2,001.48	-----	524.90	-----	1,476.56
55	Kenai-Russian River-----	1.00	14,186.56	1.00	7,627.32	-----	6,559.26
55A	Kenai Aviation Field-----		901.51	-----		-----	901.51
56	Tasnuma ² -----		1,658.14	-----		-----	1,658.14
56B	Katalia-Chilkat ² -----		7,752.56	-----		-----	7,752.56
57	McCarthy-Dan Creek-----	13,642.91	230,544.32	7,642.00	79,102.00	6,000.00	151,352.23
57A	Nizina River Bridge-----	774.63	108,749.63	774.63	42,807.80	-----	125,941.80
57B	Nizina Chitina River-----	1,438.01	7,726.62	-----	888.04	1,438.01	6,838.58
57C	McCarthy-Kennecott River-----	75.00	516.27	75.00	516.27	-----	-----
57D	Chititu Branch-----	221.29	7,865.42	221.29	1,636.94	-----	6,228.48
57E	McCarthy-Green Butte-----		2,178.42	-----	2,178.42	-----	-----
57F	McCarthy Aviation Field-----		2,923.11	-----	344.23	-----	2,580.88
57G	Copper Creek Trail-----		301.98	-----		-----	301.98
57H	Chitina River Aviation Field-----		735.00	-----		-----	735.00
58	Hyder-Salmon River ¹ -----		63.50	-----		-----	63.50
59	Fairbanks Bridge-----	227.14	73,947.03	227.14	12,247.73	-----	51,690.30
59A	Fairbanks Depot-----	5,380.51	29,463.84	1,180.51	6,453.84	4,200.00	23,010.00
60A	Valdez Aviation Field-----		2,558.24	-----	206.50	-----	2,351.65
60B	Upper Tonsina Aviation Field-----		1,747.47	-----	47.50	-----	1,699.97
61	Strelna-Kuskulana-----		17,106.28	-----	4,589.73	-----	12,536.55
61A	Kotsina Trail-----		16,095.29	-----	1,523.74	-----	14,571.55
61B	Nuggett Creek Extension-----		1,630.00	-----	1,630.00	-----	-----
61C	Elliot-Kotsina-----		6,858.42	-----		-----	6,858.42
61E	Farnan Trail-----		941.96	-----	15.80	-----	926.16
61F	Bremner Trail-----	1,695.49	5,215.47	-----	46.73	1,695.49	5,168.74
61G	Bremner Aviation Field-----	500.00	500.00	-----		500.00	500.00
62	Dime Creek-----	1,172.34	78,869.24	1,172.34	35,166.28	-----	43,702.96
62A	Haycock-Bear Creek-----		517.82	-----	301.82	-----	216.00
62B	Haycock Aviation Field-----	2,010.40	2,115.40	-----		2,010.40	2,115.40

62C	Koyuk Aviation Field-----	\$285.90	\$312.98	\$285.90	\$285.90	-----	\$27.08
63	Dunbar Brooks-----	115.64	31,525.72	115.64	12,296.13	-----	19,220.59
63B	Brooks-Livengood Creek-----	191.50	33,223.88	191.50	13,159.02	-----	20,064.86
63BA	Army Creek Branch-----		2,368.45	-----	300.00	-----	2,068.45
63C	Brooks Tram ² -----		63,455.30	-----	45,144.09	-----	18,311.30
63D	Brooks Aviation Field Road-----		713.00	-----		-----	713.00
63E	Livengood Aviation Field-----	164.12	2,778.87	164.12	624.87	-----	2,154.00
64	Cripple Lewis Landing ² -----		100.00	-----	100.00	-----	
64A	Cripple-Cripple Mountain-----		553.65	-----	261.65	-----	292.00
64AA	Cripple-Cripple Mountain (winter) 8.08		860.03	8.98	248.98	-----	611.05
65A	Gulkana-Chistochina-----	45,191.00	350,435.66	22,101.00	82,572.16	\$24,000.00	267,863.50
65B	Chistochina-Slate Creek-----	2,946.18	7,132.91	-----	109.50	2,946.18	7,023.41
65C	Chistochina-Slam-----	77,007.55	126,274.51	5,006.00	5,008.20	72,001.85	121,176.31
65D	Kechumstuk-Tanana Crossing-----		1,669.82	-----	1,669.82	-----	
65E	Chicken-Ketchumstuk-----		1,663.50	-----	1,663.50	-----	
65F	Grundler-Tanana Crossing-----	176.90	12,174.17	176.90	2,801.46	-----	9,372.71
65G	Slana-Chisma-----	4,384.91	16,717.80	-----	950.12	4,384.91	15,737.77
65H	Tanana Crossing Aviation Field-----		550.00	-----		-----	550.00
65K	Chistochina Aviation Field-----		2,067.97	-----		-----	2,067.97
66	Matanuska-Chickaloon ² -----		1,268.30	-----		-----	1,268.30
67	Nome-Teller-----	960.89	11,497.69	960.89	11,197.69	-----	300.00
67A	Teller-Cape Prince of Wales---	27.90	2,970.98	27.90	2,970.98	-----	
67B	Teller-Bluestone-----	1,694.13	11,950.27	1,694.13	6,273.82	-----	5,676.45
67C	Teller-Pilgrim Hot Springs----	21.55	3,138.05	21.55	1,338.05	-----	1,800.00
67D	Teller-American River-----		906.34	-----	56.67	-----	849.67
67E	Teller Aviation Field-----	110.40	1,071.20	110.40	318.40	-----	762.80
67F	Tin City-Goodwin-----	202.50	2,659.42	292.50	561.60	-----	2,097.82
67G	Lost River Aviation Field-----		121.40	-----		-----	121.40
67H	Wales Aviation Field-----		121.40	-----		-----	121.40
67J	Woolley-Gold Run-----	4.25	29.25	4.25	29.25	-----	
68	Flagging Trails-----	1,895.94	98,835.12	1,895.94	98,835.12	-----	
70	Misc. Surveys & Reconnaissances 6,159.72		21,503.84	-----	1,008.76	6,159.72	20,465.08
72	Wrangell Oil Dock ¹ -----		4,964.97	-----		-----	4,964.97
72A	Wrangell Cemetery Rd ¹ -----		8,630.22	-----	2,350.00	-----	6,280.22
73	Marshall Road-----	1,102.48	23,569.93	241.48	8,000.88	921.00	15,470.05
73A	Kotlik-Marshall-----	82.15	3,614.65	82.15	2,704.65	-----	850.00
73B	Stayabok-----		1,660.00	-----		-----	1,660.00
73C	Old Hamilton-Scammon Bay-----	62.00	2,440.18	62.00	586.73	-----	1,853.45
73D	Marshall Aviation Field-----	100.00	2,100.00	100.00	100.00	-----	2,000.00
75	Anchorage Loop-----	7,756.55	121,541.34	7,756.55	64,537.55	-----	57,003.79
75A	Anchorage-Lake Spenard-----	1,968.20	21,942.81	1,908.20	11,932.58	-----	10,010.23

Consolidated cost summary - Continued

75C	Chester Creek boat landing----	\$122.90	\$1,341.18	\$122.90	\$558.75	-----	\$782.42
75D	Anchorage Depot-----	161.27	7,383.93	161.27	3,417.58	-----	3,966.35
75E	McDonald Road-----	165.18	2,820.03	165.18	1,714.90	-----	1,105.13
75G	East First St., Anchorage ² -----		1,023.46			-----	1,023.46
75H	Lake Spenard Aviation Field-----		277.45			-----	277.45
75I	Oilwell Road-----	902.99	7,297.77	902.99	2,707.78	-----	4,589.99
75J	Anchorage Aviation Field-----	154.20	4,768.20	154.20	154.20	-----	4,614.00
75L	Anchorage Loop-Eklutna-----	192.29	2,717.75	192.29	192.29	-----	2,525.46
75M	Anchorage Radio Road-----		448.09			-----	448.00
76	Cantwell-Valdez Creek-----		10,793.95		2,953.75	-----	7,840.20
76A	Valdez Creek Aviation Field-----		1,337.10			-----	1,337.10
78	Valdez Depot-----		5,266.56		5,266.56	-----	
79	Seward Depot-----	57.50	4,171.55	57.50	4,171.55	-----	
80A	McGrath-Takotna-----		368.05		368.05	-----	
80AA	McGrath-Takotna(winter)-----	137.80	5,075.15	137.50	2,803.15	-----	2,182.00
80B	McGrath-Telida-----	253.74	12,376.50	253.74	5,108.38	-----	7,178.21
80C	McGrath-Candle Creek-----		305.20		305.20	-----	
80D	Nixon Fork-Nixon Mine-----	36.78	2,384.78	36.78	36.78	-----	2,348.00
80E	Takotna-Twin Peaks-----		213.16		100.00	-----	113.16
80F	Medfra-Nixon Mine-----	93.60	3,553.20	93.60	1,753.20	-----	1,800.00
80G	Takotna-Nixon Fork-----		610.56		610.56	-----	
80GG	Takotna-Nixon Fork (winter)-----		183.16		183.16	-----	
80H	McGrath Aviation Field-----	63.50	14,400.93	63.50	63.50	-----	14,346.43
80J	Medfra Aviation Field-----		345.00		60.00	-----	285.00
81	Good Creek-Salmon River-----	255.10	13,084.03	255.10	3,993.89	-----	9,900.14
81A	Rink River-----		1,550.00			-----	1,550.00
82	Taku River ¹ -----		20,208.95			-----	20,208.95
84	Fairbanks-Council Survey-----		41,528.75			-----	41,528.75
86	Fourth of July Creek-----	556.60	4,751.26	556.60	3,590.03	-----	1,161.23
87	Woodchopper Creek-----		872.00		810.00	-----	62.00
88	Perry-Eva Creek-----	7,008.65	24,175.33	7,008.65	9,815.64	-----	18,350.89
89	Kougarok Reconnaissance-----		4,312.11			-----	4,312.11
89A	Seward Peninsula Railroad-----	12,200.94	197,540.06	12,200.94	133,000.14	-----	64,539.92
89B	Pilgrim Aviation Field-----	10.40	1,126.40	10.40	410.40	-----	716.00
89C	Iron Creek-American Creek-----	292.50	2,478.67	292.50	723.75	-----	1,754.92
90A	Shelter Cabins, First Division-----		340.35			-----	340.35
90B	Shelter Cabins, Second Div.---	1,424.03	39,197.96	1,000.70	7,286.66	\$383.33	31,911.30
90C	Shelter Cabins, Third Div.---	21.55	24,720.02	21.55	2,328.90	-----	22,391.12
90D	Shelter Cabins, Fourth Div.---	1,254.30	42,419.33	504.30	5,495.15	750.00	36,954.18
91	Yakutat ¹ -----		50.55			-----	50.55
92A	Bethel-Quinhagak-----	268.00	2,979.21	268.00	1,181.71	-----	1,797.50

Consolidated cost summary - Continued

92B	Bethel-Tulusak-----	\$966.89	\$3,755.13	\$966.80	\$2,276.65	-----	\$1,478.48
92C	Akiak-Russian Mission-----	150.75	1,734.75	150.75	150.75	-----	1,584.40
92D	Bennett's Cut-Off-----		396.00			-----	396.00
92E	Yukon-Kuskokwim Portage-----	89.83	27,541.66	89.83	1,025.68	-----	26,515.98
92F	Quinhagnak-Goodnews Bay-----	80.86	2,863.27	80.86	445.50	-----	2,417.77
92G	Goodnews Bay-Togink-----		2,428.57		225.24	-----	2,203.33
92H	Togiak-Nushagak-----		8,492.98		4,300.82	-----	4,192.16
92I	Lewis Point-Naknek-----	382.56	4,171.66	382.56	1,539.32	-----	2,632.34
92J	Naknek-Egegik-----	166.34	2,082.84	166.34	877.84	-----	2,105.00
92K	Egegik-Kanatak-----		1,168.50		818.50	-----	350.00
92L	Crooked Creek-Aniak-----	196.56	1,940.74	196.56	1,129.74	-----	820.00
92M	Anink-Tuinksak-----	205.04	3,927.35	205.04	1,412.39	-----	2,514.96
92N	Akiak-Canyon Creek-----		306.00		306.00	-----	
92O	Tuluksak-Foothills-----	27.80	1,471.94	27.80	286.82	-----	1,185.12
92P	Holy Cross-Kaltshak-----	242.67	1,362.77	242.67	862.77	-----	500.00
92Q	Upper Landing-Bear Creek-----	2,691.04	8,210.02	2,691.04	4,119.04	-----	4,100.00
92R	Dillingham-Snag Point-----	14,511.27	16,417.58			\$14,511.27	16,417.58
93	Chulitna Trail-----	72.00	8,809.44	72.00	1,943.00	-----	6,956.44
93A	Bull River Trail-----		4,515.60		983.28	-----	3,582.82
93B	Indian River-----		6,579.63		13.40	-----	6,566.23
93C	Curry Aviation Field-----	3.84	4,221.05	3.84	844.45	-----	3,376.60
93D	Chulitna Tram-----	3.34	523.71	3.34	3.34	-----	520.37
93E	Hidden River Tram-----	135.92	135.92			135.92	135.92
94	Kodiak-Abberts-----	2,171.85	62,619.07	2,171.85	15,810.56	-----	46,808.51
95	Kanatak-Becharof Lake-----		30,276.74		6,394.43	-----	23,882.31
95B	Larsen Bay-Kariuk River-----		962.05			-----	962.05
96	Chickaloon-King River-----	37.00	1,870.68	37.00	1,070.68	-----	800.00
96A	Chickaloon Cable-----	20.22	404.44	20.22	132.15	-----	272.29
96B	Chickaloon-Nelchina-----	366.66	8,283.83	366.66	783.45	-----	7,500.37
97	Suntrana Footbridge-----		413.80			-----	413.80
97A	Healy Aviation Field-----		491.79			-----	491.79
98	Homer Spit-----	250.45	37,474.75	250.45	4,605.00	-----	32,869.75
98A	Nuka Bay-----		5,757.75		2,106.77	-----	3,650.98
98B	Ninilchik Aviation Field-----		384.18			-----	384.18
98C	Kasilof Aviation Field-----		674.52			-----	674.52
98D	Kasilof Road-----	1,012.10	18,158.45	1,012.10	1,012.10	-----	17,146.35

Consolidated cost summary - Continued

100	Office & General Overhead-----	\$30,453.65	\$580,323.20	\$19,242.31	\$307,483.97	\$11,241.34	\$272,839.29
101	Territorial General Overhead-----		71,521.31	-----	31,584.89	-----	39,936.42
	Total Costs-----	1,122,750.79	18,948,120.03	678,803.87	8,669,576.71	443,946.92	10,278,552.32
110	Book Value of Plant-----	39,500.25	90,347.56	-----	-----	-----	-----
111	Supplies & materials on hand	44,219.76	206,620.27	-----	-----	-----	-----
	Total Expenditures---	1,030,030.78	19,245,105.86	-----	-----	-----	-----

¹Transferred to Department of Agriculture.

²Abandoned

³Includes \$932,280.46 of supervised funds.

⁴Includes \$1,312.40 General Accounting Office settlements. Does not include \$3,858.13 reimbursements and receipts from sales.

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²⁶At the conclusion of twenty-eight years of service, the Alaska Road Commission could look back on a solid record of achievement.

Footnotes

1. Donald MacDonald, "Report on Winter Trail Conditions Chatanika to Fort Yukon, February 28, 1929, R. G. 30, ARC, box 65480, Federal Records Center, Seattle, Washington.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. "Condition of the Richardson Highway, Alaska, May 10, 1929," RG30, ARC, box 65481, Federal Records Center, Seattle, Washington.
8. Ibid.
9. Ibid.
10. Annual Report of the Alaska Road Commission, 1932, p. 37.
11. Lottsfeldt to Gillette, May 29, 1929, R.G.30, ARC, box 65479, Federal Records Center, Seattle, Washington.
12. Christianson to Engineer Officer, ARC, June 10, 1929, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
13. Ibid.
14. Christianson to Engineer Officer, June 10, 1929, R.G. 30, A.R.C., box 65480, Federal Records Center, Seattle, Washington.
15. Report Upon The Construction and Maintenance of Roads, Bridges and Trails, Alaska, Extract From the Annual Report of the Chief of Engineers, 1931 (Washington, D.C.: Government Printing Office, 1932), pp. 2274-2275.
16. Ibid., p. 2275.
17. Ibid.
18. Annual Report of the Alaska Road Commission, 1932, p. 20.
19. Ibid.
20. Ibid., pp. 3-4.

21. Ibid., p. 11.
22. Ibid., pp. 11-12.
23. Ibid, p. 12.
24. Ibid.
25. Ibid., pp. 12, 11.
26. Ibid., pp. 45-55

CHAPTER TEN

THE ALASKA ROAD COMMISSION AND ALASKAN AVIATION

Major James G. Steese, the president of the Commission, submitted his annual report in October 1927. He obviously took pride in the achievements of his organization. From 1905 to 1927, the Commission had constructed 1,487.5 miles of wagon road, 100 miles of tramroad, 1,221.5 miles of sled road, 6,925.5 miles of permanent trail, and 712 miles of temporary flagged trail, for a total of 10,446.5 miles. Considering Alaska's huge size of 586,600 square miles, the total mileage was not impressive, but when taking into account the territory's rugged terrain, extremes in temperatures, and the relatively modest Congressional appropriations over the years, the ten-thousand odd miles of roads and trails did look imposing.¹

Steese noted the continued cooperation between Territorial officials and the Commission, based on section 17 of the Territorial road law of April 21, 1919. Under this section, Commission personnel had also performed territorial functions. For example, Anton Eide, the assistant superintendent of the Commission for southwestern Alaska had acted as chairman and secretary of the Territorial Divisional Road Commission for the third division, while Hawley Sterling, the superintendent for the Fairbanks district, had filled the same position for the Territorial Divisional Road Commission for the fourth division. In fact, the territory had not maintained its own road organization since March 31, 1921.²

During fiscal year 1927, Eide and Sterling, under the supervision of the Commission had expended \$13,052.15 and \$13,844.42, respectively. In addition, the Commission had been responsible for the expenditure of the following Territorial monies:

	Allotted	Expended
Cooperative Projects	\$127,550.00	\$127,550.00
Shelter cabins	25,000.00	8,624.34
Aviation fields	23,926.38	10,366.74

Telephone lines	7,468.40	1,382.50
Nome Harbor	2,500.00	2,500.00
Valdez Dike	10,000.00	10,000.00

When bills needed to be paid, the Commission charged the territory for work performed, while local banks disbursed divisional funds, but the Commission audited all vouchers under the same restrictions applying to federal vouchers before being certified to the territorial treasurer for payment.³

The Commission also had continued its cooperative effort with the territory on the rehabilitation and operation of the Nome to Shelton tramroad, situated on the Seward Peninsula and approximately 87 miles long, and the Tolvana tramroad, located about 50 miles northwest of Fairbanks and extending from the town of Brooks about 13 miles south to the head of navigation on the Tolovana River. The Commission had spent \$22,073.16 on the rehabilitation of the former, and \$6,932.08 on the latter. In addition, the Commission had assumed the repair and maintenance of 400 miles of telephone lines for the territory, and the construction and maintenance of 24 aviation fields.⁴

"The aviation," as Alaskans called it, had become very important in the Territory by 1927. The first plane to fly in Alaska took off from Fairbanks on July 4, 1914. Fairbanksans always celebrated the Fourth of July with foot, horse, and bicycle races, tugs of war, and baseball games - and this time they added an aerial circus. Arthur Williams, the owner of the Arcade Restaurant, and two other merchants hired aviator James Martin from the states, and paid his and his wife's transportation as well as the shipment of his small tractor biplane. It was an expensive undertaking and cost the three men several thousand dollars. They made a good choice, in picking Martin, for he was one of the earliest aviation pioneers in the United States and had invented the first successful tractor biplane in 1911 with which he set a world speed record of seventy miles per hour. An Army consulting engineer during World War I, he became a good friend of General Billy Mitchell, the Army advocate of air power, and subsequently invented numerous

other aeronautical products and manufactured those together with planes and automobiles at a factory in Garden City, Long Island, and New York.⁵ That was in the future, however.

The promoters planned to hold the aerial circus at the ball park. They planned to charge five dollars a head for admission, expecting a large crowd. But when Martin went up in his plane, the ball park was almost empty, but spectators all over town covered rooftops and wood-piles, watching the show for free. After one false try, Martin's biplane lifted into the air, and flew some 400 feet above the baseball diamond for nine minutes before it settled down. He flew four times, but the promoters lost a bundle of money.⁶

In 1920 General Mitchell sponsored the flight of the Army Air Service's Black Wolf Squadron from New York to Nome. This flight showed Alaskans what airplanes could do. It took the squadron, under the command of Captain St. Clair Streett, almost six weeks to reach Alaska. Finally, they landed at the ball park in Fairbanks joyously greeted by a large crowd of residents. "Wrong Font" Thompson, the editor of the Fairbanks Daily News-Miner, wrote that "adventurers of an earlier day take their hats off to the advance guard of the new generation who are blazing a pioneer trail by means of locomotion which seems almost super human and uncanny in its marvelous accomplishment."⁷

Several individual pilots followed the Army fliers, but Carl Ben Eielson probably was the most important figure for the development of Alaskan aviation. He arrived in Fairbanks in 1922 to teach school. A graduate of North Dakota State University, he taught mathematics and general science and coached basketball at the red frame high school on Eighth Street. But what Eielson wanted to do was to fly, not teach. He had learned flying in the Army Air Service during World War I. And soon Eielson persuaded Fairbanksans to buy a plane for him, a Jenny with an OX-5 engine. Dick Wood, a pioneer banker, gave most of the money. The plane arrived in Fairbanks on July 1, 1923, and three days later he climbed into the wicker seat of the open cockpit plane and made the first commercial flight in interior Alaska. Wood, his princi-

pal financial backer, climbed in behind him, well fortified with "Alaska Mule", a vicious local moonshine liquor. The two flew to Nenana, fifty miles from Fairbanks on the Alaska Railroad. That summer Eielson made several more cross-country trips, hauling passengers and light freight to nearby towns.⁸

Late in November of 1923, the United States Post Office gave Eielson a contract for ten twice-monthly mail trips from Fairbanks to the town of McGrath, more than three hundred miles distant. The Department also shipped him a Liberty-powered DeHavilland for the flights and agreed to pay him two dollars a mile - less than half the cost of transporting mail by dogsled. "The Aviation" had arrived in the north, and it was destined to revolutionize transportation, helping to tie together a vast subarctic subcontinent.⁹

With aviation established in the north, it became necessary to build aviation fields. As early as 1925, G. R. Jackson investigated landing fields in Nome on behalf of Alaska's first bush pilot, Noel Wien, a Minnesota farm boy who had arrived in Fairbanks in 1924. Soon Wien compiled a list of aviation firsts which was almost endless. And since he was Alaska's first bush pilot, almost every flight he made was an inaugural. He was the first to fly the 350 miles from Anchorage through the Alaska Range alongside Mount McKinley's 20,300-foot height to Fairbanks in the Interior. He was the first to fly over and land beyond the Arctic Circle; to fly commercially between Fairbanks and Nome; and to pilot the first passenger flight from Seattle to Fairbanks. The list is indeed a very long one.¹⁰

For the first flight to Nome, Jimmy Rodebaugh, one of the owners of the Fairbanks Airplane Company, bought a very large Fokker F.III which arrived in the town on two train flatcars early in the summer of 1925. Noel Wien and his brother Ralph assembled the aircraft with a curious crowd watching their every move. The assembly was uncomplicated, because the Fokker fitted together easily, but it took some time because of the size of the parts. Rodebaugh and the other officers of the company were anxious to get the Fokker flying because it promised to double the revenue taken in from any of the company's three biplanes.

The Fokker carried five instead of two passengers at an average of one dollar per mile, and 500 pounds of freight averaging 40¢ a pound on short flights and 75¢ on flights longer than sixty miles. In addition, there still was room for any mail the owners could contract from the post office in the future.¹¹

The Fairbanks Daily News-Miner was enthusiastic about the plane, stating that "Pullman equipment has nothing on the interior of this airship." The reporter was impressed by the "red upholstered chairs and settee, easily opened windows, vases for flowers and drapes and leather fittings" which all combined to make the airplane look comfortable and beautiful. The dull green exterior finishing gave the airship an aristocratic look and gave "one the feeling that all the equipment is safe and substantial." In this aircraft Wien planned to make a round trip to Nome on the Bering Sea, some 570 miles from Fairbanks. It was a most ambitious undertaking because the traditional method of traveling to Nome in the summer took about three weeks. The trip by boat down the Tanana and Yukon Rivers and across Norton Sound, is a distance of about 1,100 miles. In the winter it was traveled by dog team, 735 miles and four weeks to reach the town. The air distance to Nome was 570 miles which the Fokker could cover in less than seven hours. Wien's flight to Nome, the first long-distance effort accomplished in the territory, advanced northland transportation from the stone to air age.¹²

Norman C. Stines, a Bostonian and mining engineer for the Fairbanks Exploration Company, chartered the Fokker for \$1,500 to fly him and two women members of his party, Midge Downer and Mrs. Mayo, to Nome. But before Wien could fly to Nome he needed a place to land and take off again. G. R. Jackson, together with an employee of the Alaska Road Commission who understood aviation field requirements, scouted Nome and vicinity for a suitable location. They discovered two: the highpoint on Bessie Road between where Osborne Road branched off and Bourbon Creek was located, which offered a strip about 500 feet long and 25 feet wide. It could easily be smoothed out and all side obstructions removed without expense. The second was the parade grounds of the Army's old Fort

Davis, covered with driftwood and with a telephone line running through its center. Jackson estimated that clearing a 1,000 foot strip along the south side between the sea and the telephone line would cost fifty dollars. This sandy field had a length of 1,800 feet from the bridge to the first building at the fort and offered no overhead obstructions. It was 200 feet wide with a five percent slant dipping toward the sea; and across the Nome River from this field there was a 500 foot long meadow, about 75 feet wide, covered with goose grass which required no work and extended the strip. The Fokker needed a 900-foot run after touchdown. It had no brakes and its skid was a shovel type, three inches wide and six inches long. A sharp skid would not have dug in deep enough, because the craft was so light on the empennage that Wien could pick it up and walk the tail around without help. So Noel chose the Fort Davis field, provided it did not consist of loose sand, and that it be cleared of all driftwood, making it 1,400 by 500 feet without obstructions at either end.¹³

To comply with Wien's specifications, Jackson hired Billy Rowe for \$1,100 to clear, level, roll and generally put the field into the same condition army aviators enjoyed when they landed in Nome in 1920. It would be 1,400 feet long, he assured Noel, but only 300 feet wide because that was the distance from the sea to the Nome River. The telephone line was to be removed, and although there was some loose sand, the field's center was fairly firm. The Fairbanks Airplane Company guaranteed the \$1,100 payment to Rowe, and informed Jackson that the Territorial legislature had appropriated \$5,000 for the Nome field and asked the Alaska Road Commission to accomplish the work.¹⁴

On June 7, 1925, hundreds of Fairbanks citizens watched as thirteen people lined up to have their photograph taken standing in front of the Fokker. There was Jimmy Rodebaugh, dressed in coveralls, Norman C. Stines, in breeches and matching jacket, boots, white shirt, and tie, and his two companions, Midge Downer and Mrs. Mayo. Others posing in their Sunday best were Mayor Frank de la Vergne of Fairbanks, airplane company stockholders, Mr. and Mrs. Wood, and Mr. and Mrs. Frank Gordon, store owners, and Frank Struthers. Ralph Wien in coveralls stood be-

side his pilot brother in boots, breeches, leather jacket, and cloth cap. A uniformed conductor of the Alaska Railroad pretended to dispatch the historic flight. Then the Stines party climbed aboard, and the photographer shot one more picture with Mayor de la Vergne handing Noel a letter addressed to the Mayor of Nome. Noel started the engine, and after a long takeoff run between lines of autos and trucks, the Fokker was airborne at 10:45 p.m. on June 7, 1925, carrying 1,350 pounds which placed it over the aircraft's posted gross weight of 4,800 pounds. Noel climbed to 4,000 feet and cruised west at ninety miles an hour, passing Nenana on the left, Manley on the right, and picking up the Yukon at Tanana Village. From there on Noel did not know the country below him. He planned to follow the Yukon to where it just turned sharply south after receiving the Koyukuk River, 300 miles west of Fairbanks. There he would leave the Yukon and continue westward over the mountains between Nulato and Norton Bay and follow the coast to Nome. Wien carried Coast and Geodetic Survey charts of the Yukon and the Bering Coast, and he believed old-timers who had told him that the Yukon had many sand bars suitable for emergency landings along its entire length. That faith proved to have been misplaced.¹⁵

Wien was to land on a sand bar at the little mining settlement of Ruby, but when he got there at 12:45 in the morning there was no sand bar. In fact, since the river ran high after breakup, Wien had seen no sand bars at all on the trip. So he continued on, but about forty miles from Ruby Wien ran into heavy weather covering the whole Nulato range from north to south. Since he did not know how much rain the engine could take, and did not know the country ahead, he turned back. Wien had seen a cleared place on top of a hill above Ruby and there landed the plane. It ran uphill a couple of hundred feet and got to the top. It was a baseball field, and just over the highest point the plane rolled down, hit a soft spot and nosed over and slowly somersaulted onto its back. Noel and Ralph Wien helped the passengers out of the cabin. Fortunately, nobody had been hurt, and the damage to the plane was slight. The propeller was shattered, and approximately a foot of the balanced rudder was crushed down. Wien

had landed in four hundred feet a plane which needed a nine-hundred-foot landing run, and instead of smashing it and killing all five people aboard, had left it needing only a new propeller, some tube straightening, and a piece of petticoat to make it flyable again.¹⁶

Many of Ruby's population of 125 souls gathered at two in the morning and took the unexpected visitors down the bluff to the roadhouse where they slept a few hours. After these few hours of rest, Stines decided to forego any further flying, and hired a small boat to try to catch up with the regular Yukon steamer going to Saint Michael on Norton Sound, and from there take another scheduled boat along Norton Sound to Nome. As soon as the Army Signal Corps radio station opened later in the morning, Wien contacted Fairbanks Airplane Company and reported the accident and damage. Dick Wood promised to rush a spare propeller via gasoline launch to Ruby, hoping that he could cover the 220 miles to Ruby in two days. While Stines and his party departed downriver, Wien and Ralph set to work repairing the Fokker. The entire village helped right the plane, and village women supplied cloth for patching the fabric. Wood arrived with the propeller on the second day, having covered the distance to Ruby in a record thirty hours. Soon they were airborne again, and after a flawless flight of three hours and forty minutes out of Ruby the Fokker swooped down over Nome, and landed on the newly prepared strip on June 9, pronouncing it to be "satisfactory for use during this season flights....." Another \$500 had to be spent to make the field safe, but the Commission planned to construct a new one about one mile north of Nome - which was to be the permanent air-field.¹⁷

The Territorial legislature had indeed appropriated \$5,000 for "aeroplane landing fields in the Second Division of Alaska," directing the Territorial Board of Road Commissioners to select appropriate sites for such construction. The latter, as already stated, turned the responsibility over to the Commission under the terms of the 1919 cooperative agreement. At the suggestion of Noel Wien, the Commission then built a permanent airfield at the Bessie Road site. It consisted of two runways, an east-west and north-south one, the first 1,300 by 200 feet

and the second 1,400 by 200 feet. The construction task was easy and inexpensive because the area was underlain with gravel and covered only with bunches of moss which had to be removed, the runways dragged, and then smoothed and rolled.¹⁸

Alaskans quickly realized that the airplane was the ideal mode of transportation for the huge and rugged territory. Trips that would have taken weeks could now be covered in hours, and soon requests for construction of aviation fields poured in. William H. Hesse, the superintendent of the Chandalar Gold Company, made one of these in the summer of 1925. R. J. Sommers, the territorial highway engineer, told Hesse that \$600 was available for such work. Sommers also established procedures for such construction projects. The Territory and the Alaska Road Commission had adopted a standard size for aviation fields, 1,400 by 600 feet, extending in the general direction of the prevailing winds in order to permit planes to take off and land against the wind. Fields were to be smooth and firm, and this required a location with good drainage. It had to be absolutely free from soft spots, Sommers explained, because the planes in use weighed between three to five thousand pounds, and "when the plane comes to rest the entire weight is supported on the two-wheel landing gear and a plane in landing hitting a soft spot on the field is almost sure to result in a wreck." Hesse was to spend no more than \$600 for the work, and Sommers expected that the citizens of the area served would provide any additional funds needed.¹⁹

In the summer of 1925, the Territorial Board of Road Commissioners authorized funds for airfield construction in a number of locations. The Alaska Road Commission was to construct fields at Takotna (\$1,500) and Flat (\$1,000). The Board asked that citizens form local aviation committees in various communities which were to select the sites, receive Territorial funds, and raise local contributions. The estimated cost of the Fort Yukon field amounted to \$900, and of this amount the community had agreed to contribute \$600 in cash or work. The local aviation committee in Wiseman laid out the field, contributed \$1,000 and the Board paid \$2,000. Brooks was to receive \$300 and Lake

Minchumina \$700, while no final arrangements had yet been made for Ruby, Circle and Chena Hot Springs.²⁰

On January 30, 1928, the Fairbanks district of the Alaska Road Commission reported that fifteen airfields had been constructed for a total cost of \$13,963.03. The territory had funneled \$11,018.03 into the work, cash contributions had amounted to \$1,500 and donated labor had been worth \$1,445.00. Work on aviation fields progressed rapidly hereafter. At the end of 1934, Hawley Sterling, the acting chief engineer of the Alaska Road Commission, submitted a summary of existing and proposed airfields to Captain Murray Hall, the inspector of the Aeronautical Division of the Department of Commerce. By that time the Commission also had established class "A" fields, having two runways, each 300 by 3,000 feet, and emergency landing fields with an estimated size of 200 by 1,500 feet with only one runway. Sterling estimated that it would cost \$905,000 to improve existing fields, upgrade others and build additional emergency fields. This cost estimate, he warned, included only construction costs of the field but nothing for radio, lights, accommodations, depots or hangers. The Alaskan aviation community, the Commission, and the Territorial Board of Road Commissioners all hoped that the Department of Commerce would allocate the estimated funds for airport improvement and construction in the north.²¹

EXISTING AND PROPOSED AVIATION FIELDS IN ALASKA (ALPHABETICAL LIST)
AS OF 1934

Name	Route No.	Item No.	Miles From	Est. Cost to Complete	Remarks
Akiak	3	3	Ketchikan	1535	3500
American Creek	1	1	Ketchikan	1000	1000
Anchorage	2	2	"	1020	25000
Aniak	3	3	"	1465	3500
Bear Creek	3-C	1	Bethel	75	2000
Bethel	3	4	Ketchikan	1555	50000
Bettles River	1-D	1	Fairbanks	230	2000

Big Delta	1	3	Ketchikan	890	2000
Birches	1	3	"	1155	4000
Boundary	1 & 2	4	"	715	35000
Bramner	4-A	1	Cordova	110	5000
Bluff	1 & 2	1	Ketchikan	1475	2500
Cache Creek	5-A	1	Seward	200	3000
Candle	1-C	1	Koyuk	75	5000
Cantwell	5	1	Seward	255	5000
Chandalar	1-DA	1	Fairbanks	260	4000
Chena Hot Springs	1-B	1	"	50	3000
Chicken	1-A	1	Ketchikan	860	3000
Chisana	4-A	1	Cordova	215	3000
Chistochina	2	1	Ketchikan	320	2000
Circle Hot Springs	1-C	1	Fairbanks	100	2000
Copper Center	4	2	Cordova	150	20000
Cordova	4	1	Fairbanks	350	25000
Council	1-I	1	Nome	60	2500
Cripple	2-D	1	Anchorage	300	3000
Crooked Creek	3	3	Ketchikan	1395	3500
Curry	5	1	Seward	185	2000
Deering	1-J	1	Nome	135	2000
Damenti	2	3	Ketchikan	1395	5000
Dillingham	2-C	4	Anchorage	360	40000
Donnelly	4	3	Cordova	275	2000
Eagle	1-A	1	Ketchikan	920	2000
Egegik	2-CA	3	Anchorage	350	4500
Fairbanks	1	2	Ketchikan	970	25000
Flat	2	2	"	1345	20000
Fort Yukon	1-C	1	Fairbanks	180	3000
Ganes Creek	2-B	1	Anchorage	265	3000
Gold Run	1-K	3	Nome	40	3500
Golovin	1-H	1	Koyuk	65	3500
Gun Creek	4	3	Cordova	255	2000
Haines	1	3	Ketchikan	330	2500
Haycock	1-G	1	Koyuk	25	2000
Healy	5	1	Seward	285	1500
Homer	2-B	3	Anchorage	140	2000
Iliamna	2-C	4	"	205	30000
Johnson River	1	3	Ketchikan	840	3000
Juneau	1	2	"	260	15000
Kaltag	1-F	3	Nulato	35	3500
Kasilof	2-B	1	Anchorage	80	2000
Kenai	2-B	1	"	70	2000
Ketchikan	1	1	Nome	1525	----
Kiwalik	1-G	1	Koyuk	85	2000
Kobuk	1-JA	1	Nome	310	3000
Koggiung	2-C	3	Anchorage	295	4000
Kotzebue	1-G	1	Koyuk	150	3000
Koyuk	1	2	Ketchikan	1385	35000

Water Landing
only

Koyukuk Station	1-B	3	Ruby	70	3500
Livengood	1-D	1	Fairbanks	55	2000
Louden	1	3	Ketchikan	1250	3500
Lucky Shot	2-A	1	Anchorage	50	2000
Manley Springs	1	3	Ketchikan	1060	5000
Marshall	3-B	1	Bethel	75	3000
Matanuska	2	3	Ketchikan	990	3000
McCarthy	4-A	1	Cordova	145	2000
McGrath	2	2	Ketchikan	1255	20000
McKinley	5	1	Seward	275	3500
Medfra	3	3	Ketchikan	1220	3000
Minchumina	3	1	"	1110	3000
Moose Creek	2	1	"	970	2500
Moses Point	1-B	1	Koyuk	20	3500
Momtrak	2-C	3	Anchorage	470	5000
Nabesna	2	1	Ketchikan	765	1000
Naknek	2-CA	3	Anchorage	320	4000
Napamute	3	3	Ketchikan	1425	3500
Nelchina	2	3	"	895	4500
Nenana	3	2	"	1015	35000
Ninilchik	2-B	1	Anchorage	105	2000
Nome	1	2	Ketchikan	1525	25000
North Fork	3	3	"	1175	5000
Nulato	1	2	"	1295	35000
Ophir	2-D	1	Anchorage	270	3000
Palmer Creek	1-B	1	Fairbanks	65	3000
Paxson	4	3	Cordova	225	5000
Petersburg	1	1	Ketchikan	130	----
Pilgrim Springs	1-J	1	Nome	45	2000
Poorman	2-D	3	Anchorage	340	5000
Portage	1	3	Ketchikan	1335	5000
Rainy Pass	2	3	"	1145	5000
Reindeer	2	3	"	1310	3500
Ruby	1	1	"	1215	3000
Saint Michael	1-F	3	Nulato	155	5500
Salcha	1	3	Ketchikan	930	3500
Seldovia	2-3	3	Anchorage	155	10000
Seward	5	2	Fairbanks	375	25000
Skagway	1	1	Ketchikan	350	5000
Skwentna	2	4	"	1100	37000
Solomon	1	1	"	1495	2000
South Fork	2	4	"	1180	37000
Spencer	5	3	Seward	45	2000
Steel Creek	1-A	3	Ketchikan	885	4000
Susitna	2	1	"	1055	2000
Takotna	2	1	"	1270	2200
Talkeetna	2	4	Seward	165	30000
Tanana	1	2	Ketchikan	1105	15000
Tanana Crossing	1	2	"	795	10000

Water Lan
only

Talida	3-A	1	Fairbanks	195	3000	
Teller	1-K	1	Nome	65	2000	
Tetling	1	3	Ketchikan	760	3500	
Thompson Pass	4	3	Cordova	80	3000	
Tolovana	1	3	Ketchikan	1030	3500	
Tonsina	4	1	Cordova	125	2000	
Ugashik	2-CA	3	Anchorage	400	5000	
Unalakleet	2	1	Ketchikan	1475	2500	
Valdez	4	1	Cordova	60	10000	
Valdez Creek	5-B	1	Seward	305	3000	
Wales	1-X	1	Ketchikan	120	2000	
Wasilla	2-A	1	Anchorage	30	2000	
White Mountain	1	3	Ketchikan	1455	5000	
Whitney	2	3	"	1015	2000	
Willow	2	3	Seward	130	3000	
Wiseman	1-D	1	Fairbanks	195	2000	
Wrangell	1	1	Ketchikan	85	----	Water Landing only

Total\$905,000

NOTES:

Item Numbers are 1, 2, 3, and 4 and Designate Following:

- 1 - Existing fields to be improved
- 2 - Existing fields to be made Class "A"
- 3 - Emergency fields to be built
- 4 - Class "A" fields to be built

Hall used Sterling's summaries and maps in preparing his recommendations for the Department of Commerce. He considered the size of the emergency landing fields at only 200 by 1,500 feet to be too small, but understood that Sterling had reduced the requested estimates on 500 by 3,000 foot fields because of the tremendous costs involved. Hall recalculated the costs for the larger fields, and together with other revisions this increased the entire proposal from Sterling's \$905,000 to \$2,269,000. The Department of Commerce should spend this suggested amount, he maintained, because a complete and comprehensive airport network would be of immeasurable importance to the territory. The other means of transportation, Hall exaggerated, were "but little better and no faster than walking," and this alone should make the advantages of the airplane apparent. Commercial aviation had increased rapidly in the last few years, he asserted, "and its curtailment would be a calamity" for the territory. During

the fiscal year ending June 30, 1934, Alaska's aviation industry had transported 10,194 passengers, carried 869,000 pounds of freight, and flown a total of 1,126,610 miles -- a truly magnificent achievement.²²

Hall then developed a comprehensive airways system for Alaska which included a series of airfields lying along the best routes of travel. He also suggested the construction of five additional weather stations to be located at Anchorage, Bethel, McGrath, Boundary, Ketchikan, and perhaps a sixth one at Cordova, capable of forecasting and distributing weather reports like the two existing stations in Fairbanks and Juneau. The one-man station at Nome, inadequately equipped, needed to be upgraded. That was not all, for there also was a need for approximately thirty radio stations erected at locations commensurate with the airways system to be served. The United States Army Signal Corps, already operating more than fifteen radio stations in Alaska, could take over the operation of these additions with only a relatively small increase in personnel and funds. This would create a distinct airways radio system and avoid duplication of efforts by the Department of Commerce. Best of all, from the Alaskan perspective, Hall recommended that the federal government construct and maintain such a system, not only for the benefit of Alaskans but for the nation at large. What Hall apparently did not know was that federal funds already had been used for airfield construction in Alaska. Prior to 1933, such projects had been financed jointly by the territory, the municipalities and settlements, and to a lesser degree the Alaska Road Commission, although the latter, had, for the most part, been in charge of construction. In 1933, the Public Works Administration allotted \$110,000 for building and improving territorial airfields. The largest chunk of money, \$55,000, had been used for an airfield near Cordova, another \$5,000 for one near Nome, and the rest for some fourteen other fields in different parts of Alaska.²³

Hall's framework for the development of an Alaskan aviation system follows:

AIR FIELD CONSTRUCTION AND AIR NAVIGATIONAL DEVELOPMENT IN ALASKA

It is proposed by a series of air fields lying along the best routes of travel and tying in the principal towns and settlements of Alaska, to serve commercial development and to some extent to facilitate the travel of military aircraft and thus harmonize with the requirements of national defense.

Route No. 1. Ketchikan - Fairbanks - Nome. This route contemplates the building of Class A fields and improvement of existing fields to make them Class A fields, at the following places: Ketchikan, Juneau, Boundary (a field to be constructed in Alaska near the international boundary between the Territory of Alaska and Yukon Territory, Canada, on one of the tributaries of the White River or between the tributaries of the White River and those of the Tanana), Tanacross (formerly known as Tanana Crossing), Fairbanks, Tanana, Nulato, Koyuk and Nome, with auxiliary fields approximately every 100 miles in between dependent upon the topography of the country. Fields of a sort already exist at Juneau, Tanacross, Fairbanks, Tanana, Nulato, Koyuk and Nome, but none of these fields is sufficiently good to be entitled to Class A status. No land field whatever exists at the present time at Ketchikan or Boundary.

Route No. 2. This route ties in with Route 1 at Boundary and extends thence southwest to Anchorage and thence northwest via Rainy Pass to McGrath, Flat, Unalakleet, Koyuk and Nome, with part of the route, from Koyuk to Nome, being identical with a part of Route 1. On this route it is contemplated to improve the existing fields at Anchorage, McGrath and Flat to make them first class fields and to build two fields of the same type, one at Skwentna River and one on the South Fork of the Kuskokwim and an auxiliary field about half way between near the summit of Rainy Pass. The construction of Class A fields on the Skwentna and the South Fork of the Kuskokwim is strongly recommended by Mr. Murray Hall, inspector for the Bureau of Aeronautics in Alaska, on account of the difficulties at times in getting through Rainy Pass.

If these fields are not built, a plane approaching Rainy Pass from either direction, in the event the Pass is found to be closed, would be obliged to fly back in one direction to Anchorage and in the other to McGrath. A number of auxiliary routes also branch off from Route 2 as shown by the map, to serve the surrounding country.

Route No. 3. This route may be described as starting at either Fairbanks or Anchorage. If the route is considered as starting at Fairbanks, the Class A fields would be Fairbanks, Nenana, McGrath (which is on Route 2), Flat (also on Route 2) and thence southwest to Bethel, with intermediate auxiliary fields. If the route is considered as starting from Anchorage, it will follow Route 2 as far as Flat and then proceed to Bethel. Bethel

is the principal settlement on the lower Kuskokwim and mail is now carried there on one of the star routes by air.

Route No. 4. This route, commencing at Ketchikan with a projected Class A field, proceeds over Route 1 as far as Juneau to another Class A field, and thence northwesterly along the coast of the Gulf of Alaska to Cordova, with a number of auxiliary fields inbetween, and thence northerly to Valdez, Copper Center and Fairbanks tying into Route 1 again at McCarty about 100 miles from Fairbanks. This route between Ketchikan and Cordova will probably not be much used for several years to come but the establishment of auxiliary fields along the coast between Juneau and Cordova is highly advisable both for commercial use and from a military standpoint. The part of the route between Cordova and Fairbanks is now used quite extensively and will be flown much more in the future with the establishment of auxiliary fields. It is contemplated to build what would be substantially a Class A field at Cordova, to improve the existing field both for land and water landings at Valdez so that it too will be substantially a Class A field, and to improve the field at Copper Center to make it a Class A field. The auxiliary fields are indicated on the map.

Route No. 5. Seward to Fairbanks. There is an existing field at Seward which should be made a Class A field, the same with respect to Anchorage, a new field should be established on the Talkeetna and several intermediate fields along the route northerly to Nenana (on Route 2) and thence to Fairbanks.

Route No. 6. This may be considered as beginning at Anchorage and extending southwesterly with a Class A field to be built on Iliamna Lake, and continued thence to Dillingham where another Class A field should be constructed, and thence to Muntrak on Goodnews Bay where an auxiliary field will serve for the present, with a branch south through Koggiung to Naknek to Egegik and to Ugashik on the Alaska Peninsula. The four fields last named will, as indicated by the map, be auxiliary fields. No field whatever exists at present at Iliamna Lake or at Dillingham. There is a very considerable commercial traffic already in this region and fields at these two places have been found to be necessary.

Water Ports. It should be noted here that a great deal of the air commerce in Alaska is carried on either sea planes, amphibians or planes equipped with pontoons. Along the coast and even in the interior this has been found the best and perfect means of air travel since water landings can be had on lakes and rivers in many places where no land fields exist. Cordova, for example, has an excellent water port as well as a land field, and the same is true of Valdez and several other places. At Fairbanks water landings can be made on the Chena Slough but the stream is so

winding and so narrow that such landings usually entail a considerable degree of danger particularly to pilots who are not familiar with the region. At Anchorage the water landings are made either on Lake Spenard, which is too small for a takeoff with heavily loaded ships, or on Cook Inlet, which is frequently too rough in the summer time and in the winter is full of floating ice.

Therefore it is recommended at Anchorage an artificial lake be created by the construction of a dam in a nearby stream thus impounding the water and furnishing a lake considerably more than a mile in length; and that at Fairbanks either a lake be created or that the channel of the stream be straightened in order to permit a safe water landing for aircraft. The air traffic at both Fairbanks and Anchorage is such that the suggested water landings are necessary in addition to the Class A land fields.²⁴

While Hall had been preparing an aviation framework for Alaska, Lieutenant Colonel Henry "Hap" Arnold led ten Martin B-10 turn-engined bombers on a flight to Alaska. The Chief of the Army Air Corps, General Ben Foulois, had instructed Arnold to undertake a special assignment, namely to follow the early air trails pioneered by the Army in 1920 when General Billy Mitchell sent Captain St. Clair Streett in command of four DeHaviland 4-B biplanes on a flight from New York to Nome. Mitchell's objectives had been to keep his pilots sharp, give them experience at long-range navigation, and gather map information. Arnold's mission in 1934 was more complex, but no less daring, considering the large size of his planes in relation to the rather primitive existing landing facilities. His group was to take aerial photographs for navigation charts and future airway routes and to evaluate the feasibility of locating future defense bases in Alaska.²⁵

In the summer of 1934, Arnold and his flight group circled over Anchorage and then landed at Merrill Field where they were greeted by throngs of friendly residents. Arnold and his executive officer, Major Hugh Knerr, interviewed local pilots to accumulate information about air routes, and equipment used, such as instruments, radios, charts, maps, and navigation aids. In addition, the bush pilots gave Arnold important hints on winterizing aircraft and power plants. The Colonel gathered similar data at other Alaskan locations and then took his flight of bombers back to the states and reported to his superiors in the nation's capital. He emphasized the strategic value of the Territory, evidently skillfully; although bureaucracies work slowly,

blueprints for military bases in Juneau, Sitka, Anchorage, and Fairbanks, and for naval installations along the coast and in the Aleutian Islands were drafted. Arnold's report materially aided these labors.²⁶

The Colonel's flight undoubtedly reawakened military interest in northern aviation. Early in 1935, famed arctic explorer, lecturer, and writer, Vilhjalmar Stefansson attended a dinner in Washington hosted by an army general. During the course of the evening, Major-General Hugh A. Drum, the Assistant Chief of Staff, asked Stefansson about the relative wisdom either of stationing large, permanent military air forces in the north or providing ground facilities there with a skeletal staff. The latter would enable the army to deploy air power in the north in an emergency from bases in the states. Sometime later, Stefansson answered in a lengthy memorandum in which he considered the pros and cons of the proposition. He concluded that "for quickness and decisiveness of action, and for thorough adaptation of both personnel and equipment to Arctic and sub-Arctic conditions, it would be best to have a large force permanently in Alaska." A number of considerations, however, weighed against stationing a large airforce in the north. These included the much greater maintenance costs, and since the territory had no political clout, "the politicians would be opposed to large expenditures in Alaska." Furthermore, other powers in the area might consider such a force a threat to their security. Under these circumstances, Stefansson suggested that it might be ideal to have three main bases, in Minnesota, North Dakota, and Montana, similar in climate to interior and northern Alaska. Much of the training would take place in these three states, while the "final or post-graduate stage of training should be in Alaska in connection with establishing and maintaining there the necessary ground facilities for occupation by a large force that would come when wanted from somewhere south" of the forty-ninth parallel.²⁷

A few months later, in May 1935, Major Carl Spatz of the Air Corps, the chief of the Training and Operations Division, recommended to the Chief of the Air Corps that the federal government construct commercial

air fields and airways in Alaska complete with night lighting, radio navigation aids and communications systems. Spatz supported this proposal by pointing out that adequate airways systems would aid Alaska's economic development and eventually warrant the costs of maintenance; furnish potential operating facilities for wartime use by the Air Corps so therefore should be as complete as possible; and the lack of railroads and roads in the north called for radio aids and a communications system as complete as possible to make operations safe. At the same time, an interdepartmental committee studied Captain Murray Hall's recommendations for the development of a comprehensive airways system for the North. The War, Navy, Interior, Post Office, and Commerce Departments were represented and considered the cost of construction and maintenance computed under five different schemes. These varied from a complete lighting, equipment, and radio system, costing \$5,198,000 to build and \$1,200,100 to maintain annually, to the cheapest scheme calling for day terminals, day intermediate fields and skeletonized radio equipment with a construction tag of \$356,000. The War Department incorporated Spatz's recommendations into its proposal, and requested that seventeen landing fields be speedily developed. Fairbanks headed the list, followed by Ketchikan, Petersburg, Juneau, Valdez, Cordova, Seward, Anchorage, Copper Center, Galena, Nome, Bethel and Big Delta, and ending with Mumtrak.²⁸

Despite planning, recommendations, and high hopes, Congress did not appropriate any monies for an Alaskan airways system. In the fall of 1936, Secretary of the Interior Harold L. Ickes, neatly summarized the state of Alaskan aviation. He asserted that the airplane rendered "a greater per capita service in that territory than anywhere else on earth . . . under the most extreme and hazardous conditions existing in any populated area." The secretary stated that there were "74 so-called airfields in Alaska," and the following data indicated their inadequacies:

- 2 out of 74 had more than one runway;
- 2 out of 74 had runways longer than 3,000 feet;
- 8 out of 74 had runways between 2,000 and 3,000 feet;
- 15 out of 74 had runways between 1,500 and 2,000 feet;
- 39 out of 74 had runways less than 1,500 feet.

Ickes asserted that more often than not Alaskan aviators were forced to use sandbars and clearings rather than the airfields. The only surfacing provided was that found at the site, and in a few cases when gravel was available it was used to fill holes. None of the fields had any lighting facilities whatever, except for Fairbanks and Anchorage which each had a rotating beacon and one flood light. No public radio facilities catered primarily to air service, but seven airfields had privately-owned radios. There were no accommodations at any of the fields, and there were no privately-owned hangers for visiting planes, except at two localities, and the facilities of these two were limited. There had been no planning in constructing the existing airfields on air routes fixed by nature and climatic conditions or fixed by centers of population; rather they have been constructed at points where most needed in order to move passengers and freight from a center point to a terminating makeshift field." The Secretary pointed out that fewer than half a dozen fields had been built purely for emergency and safety, and bush pilots customarily flew as much as 300 miles in a land plane without a single landing field. In view of these appalling facts, the Alaska Road Commission and the Bureau of Air Commerce of the Commerce Department, after consulting with representatives of the War and Post Office Departments, had prepared a program of airport development calling for the expenditure of \$3,000,000. Unfortunately, Interior so far had been unable to secure emergency funds for this program. Ickes, therefore, expected to include a substantial amount in the 1938 Alaska Road Commission estimates, hoping to gradually eliminate presently existing hazards. He finally asked the War Department to instruct the Signal Corps to study the proposed airport construction program and furnish estimates for providing adequate communication aids and weather reports for this system.²⁹

Despite all the planning and high hopes, however, it was not until 1937 that the federal government contributed any funds for the construction and maintenance of Alaskan airfields and sea plane ramps, platforms, and floats. These monies fell far short of what Hall, the

Air Corps, and Ickes had envisioned. During the 1937 and 1938 construction seasons, they amounted to a mere \$214,117.31, the Territory contributed \$282,827.74 and municipalities, commercial companies and individuals chipped in \$31,066.90 for a two-year total of \$528,011.95. The Alaska Road Commission built and improved some of these airfields, and so did the Civilian Conservation Corps, while the Territory contracted with private builders and municipalities for the others.³⁰

In the fall of 1938, the Civil Aeronautics Authority became involved in the planning process for airports and airway facilities in Alaska. At an interdepartmental conference the CAA revealed its intention to improve a number of airfields in the larger municipalities, and also to install radio beams, radio communications, and make weather reports available. The CAA, however, stated that it did not intend to install modern equipment, but rather use the older, obsolescent but usable gear on hand. This plan made possible the provision of reasonable facilities over a considerable area rather than maximum facilities in a few places. The CAA intended to cover southeastern Alaska and the Aleutian Chain as far as Dutch Harbor with this communication network in addition to southcentral, interior, and northern Alaska, and eventually tie the system into the Honolulu beam.³¹

War broke out in Europe on September 1, 1939 when Germany's panzer divisions invaded and quickly overran Poland. In the closing days of that conflict, Soviet forces joined the German effort and moved across the Russian-Polish border. Across the Pacific Ocean, the Japanese pursued their third year's effort to conquer China. On February 23, 1940, General George Catlett Marshall, the Chief of Staff, presented the Army budget for fiscal year 1941 to the Subcommittee on the War Department of the House Appropriations Committee. He reminded Subcommittee members of the existing crisis abroad, and urged that "any major developments there should be paralleled by added precautions in this country. If Europe blazes in the late spring or summer, we must put our house in order before the sparks reach the Western Hemisphere." The proposed budget was a modest one in view of coming events. Including a supplemental estimate and as reduced by the Bureau of the Budget,

it asked Congress for \$906,137.254. It was the first defense budget for years to come dealing only in millions and not billions of dollars. The budget included \$12,734,000 for the construction of an operating air base near Anchorage. The hearings concluded on March 26, 1940. A few days later the Subcommittee on the War Department reported the measure to the full Appropriations Committee, but minus the funds for the Anchorage base. Despite pleas by Marshall, Major General Henry "Hap" Arnold and Alaska's Delegate to Congress Anthony J. Dimond, the Subcommittee refused to budge, and on April 4 the House voted the appropriation without the Alaskan base.³²

On April 9, 1940, Adolph Hitler's armies invaded Denmark and Norway and in the ensuing weeks occupied the two countries. When Marshall and Arnold appeared before the Subcommittee on the War Department of the Senate Appropriations Committee on April 30 and asked for the restoration of the Anchorage base, a different mood prevailed. Before the Senate Subcommittee finished its hearings on May 17, the German Luftwaffe had bombed Rotterdam without provocation or warning, and German armies had seized the Netherlands, marched through Belgium, and begun the invasion of France. The Senate restored the Anchorage base, and the House concurred. In 1939 Congress had appropriated \$4,000,000 for the construction of a cold-weather testing station for airplanes near Fairbanks. Construction had started on Ladd Field in 1940. Now, Fort Richardson and its air establishment, Elmendorf Field, could be built. On December 7, 1941, the Japanese attacked the American Pacific fleet at Pearl Harbor. America was at war, but not a single military or naval base in Alaska was ready for action. Now Congress poured billions of dollars into the defense effort, and all the plans nurtured for years to create an integrated airways system were speedily accomplished.³³

Footnotes

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2. Ibid, p. 1979.
3. Ibid., p. 1979
4. Ibid, p. 1980
5. Jean Potter, The Flying North (3030 Bridgeway, Sausalito, California: Comstock Editions, Inc., 1977), p.23. Hereafter cited as Potter, Flying North.
6. Ibid., pp. 23-24.
7. Ibid., pp. 24-26.
8. Ibid., pp. 29-34
9. Ibid., pp. 34-35, 52-54, 62-63. Eielson, the pioneer, perished in an attempt to take passengers and furs off the American motor trading ship, the Nanuk, ice-bound off the village of North Cape, Siberia, in November 1929. Not until February 18, 1930 did searchers find the pilot's body.
10. Ira Harkey, Pioneer Bush Pilot: The Story of Noel Wien (Seattle and London: University of Washington Press, 1974), pp. vii-viii. Hereafter cited as Harkey, Bush Pilot.
11. Ibid., p. 136.
12. Ibid., pp. 137, 139.
13. Jackson to Stines, May 7, 1925, Stines to Jackson, May 30, 1925, R. G. 30, ARC, box 65433, Federal Records Center, Seattle, Washington. Harkey, Bush Pilot, p. 137.
14. Stines to Jackson, June 1, 1925, Jackson to Stines, June 1, 1925, Jackson to Stines, June 2, 1925. RG30, ARC, box 65433, Federal Records Center, Seattle, Washington.
15. Harkey, Bush Pilot, pp. 138-139.
16. Ibid., pp. 140-141.
17. Ibid., pp. 142-144; Wien to Summers, June 12, 1925, Nylén et al. to Territorial Board of Road Commissioners, June 13, 1925, R.G. 30, ARC, box 65433, Federal Records Center, Seattle, Washington.

18. Theile to Steese, June 13, 1925, Oliver to Fairbanks Airplane Corporation, October 29, 1925, R. G. 30, box 65433, Federal Records Center, Seattle, Washington.
19. Sommers to Hesse, June 19, 1925, in historical files of the Alaska Department of Transportation and Public Facilities, Fairbanks, Alaska.
20. Steese to Halsem, July 13, 1925, Sommers to Oliver, May 14, 1926, Sommers to Edmunds, July 25, 1925, R. G. 30, ARC, box 65433, Federal Records Center, Seattle, Washington.
21. Report of all Expenditures Aviation Fields, Calendar Year 1927, January 30, 1928, in historical files of the Alaska Department of Transportation and Public Facilities, Fairbanks, Alaska. Sterling to Hall, November 16, 1934, R. G. 30, ARC, box 65433, Federal Records Center, Seattle, Washington.
22. Hall to Assistant Director of Air Commerce, Bureau of Air Commerce, January 4, 1935, R. G. 30, ARC, box 65433, Federal Records Center, Seattle, Washington.
23. Ibid, Dimond to Gruening, January 10, 1935, R. G. 30, ARC. box 65433; Federal Records Center, Seattle, Washington.
24. Memorandum, "Air Field Construction and Air Navigational Development in Alaska," 1935, R.G. 30, ARC box 65433, Federal Records Center, Seattle, Washington.
25. Stephen E. Mills and James W. Phillips, Sourdough Sky: A Pictorial History of Flights and Flyers in the Bush Country (New York: Bonanza Books, 1960), pp. 111-113.
26. Ibid. pp. 114-119.
27. Stefansson to Drum, January 26, 1935, Stefansson Memorandum to Drum, January 26, 1935, R. G. 18, Central Decimal Files #686, N.A.
28. Spatz memorandum to Executive, May 6, 1935, Adjutant General to Chief of Air Corps, May 3, 1935, Brigadier General O. Westover, Assistant Chief of the Air Corps to Chief of the Air Corps, May 9, 1935, R. G. 18, Central Decimal Files #68, N.A.
29. Ickes to Secretary of War, August 5, 1936, R. G. 18, Central Decimal Files #686, N.A.
30. Biennial Report of the Alaska Territorial Highway Engineer and Superintendent of Public Works, 1937-1938, (Juneau, Alaska: n. p., January 3, 1939), pp.61-65.

31. Memorandum on a conference with the CAA, September 30, 1938, R. G. 18, Central Decimal Files, #686, N.A.
32. United States Army, Alaska, The Army's Role in the Building of Alaska, Pamphlet 360-5, 1 April 1969 (Headquarters United States Army, Alaska: Anchorage, April, (1969), pp. 73-74.
33. Ibid.

CHAPTER ELEVEN

THE TRANSFER OF THE ALASKA ROAD COMMISSION

As early as February of 1917, the War Department had entertained the thought of transferring the Alaska Road Commission to the Department of the Interior, engaged in building the Alaska Railroad. The plan, recommended by Major General T. H. Bliss, was consistent with the War Department's intentions of drastically reducing its responsibilities in the north.¹

Wilds P. Richardson had left his job as president of the Commission at the end of 1917. But after having spent practically all of his productive working years in Alaska, he retained a keen interest in the North. In the late fall of 1923, Richardson discussed Army activities in Alaska with John W. Weeks, the Secretary of War, and particularly the work of the Alaska Road Commission. The Secretary asked Richardson to obtain information on the travel and general business over the Valdez-Fairbanks trail. And although the Army's work in Alaska needed no defense, Richardson asserted, the secretary wanted to be armed "with the facts briefly stated, to answer any questions or criticisms that might be made, both as to the cost of the work and its past and present value."²

Colonel John C. Gotwals, the engineer officer of the Commission, complied with Richardson's request and furnished him with traffic statistics, taken at the Salcha Ferry near Munson's Roadhouse, covering the open season from May 18 to November 1, 1923.

	<u>Persons</u>	<u>Autos</u>	<u>Trucks</u>	<u>Wagons</u>	<u>Horses</u>	<u>Tons</u>
Commercial	1080	480	30	6	12	80
U.S. Govern- ment A.R.C.	180	12	148	8	24	122
Coast and Geodetic	32	--	12	--	--	8.5
Survey						
Signal Corps	<u>81</u>	<u>--</u>	<u>55</u>	<u>2</u>	<u>4</u>	<u>40</u>
	1,373	492	245	16	40	250.5

The above statistics reported the through traffic, but there also was considerable local movement from Valdez and Chitina not destined for Fairbanks. Gotwals had only been able to ascertain that teamsters freighted some 100 tons from Valdez to the vicinity of Copper Center. Additionally, there had been much winter freighting over the road during the last season, including moving supplies from Chitina to the Slate Creek and Mentasta mining districts, and at times even as far as the Shushanna mining area. And from Fairbanks one company had freighted 150 tons of mining machinery to Caribou Creek via the Salcha River. Gotwals estimated that in addition to the figures given in the table, another 500 persons and 500 tons of freight had moved over the road. A month later, Secretary Weeks proposed that the Bureau of Public Roads of the Department of Agriculture take over the functions of the Alaska Road Commission. The Bureau already operated in Alaska as elsewhere, constructing roads on federal lands for development purposes. Weeks, therefore, thought it unwise that there "should be two agencies requiring duplicate equipment doing the same type of construction in one locality." The Secretary considered this the best solution rather than transferring road-building responsibilities to the Department of the Interior, which had no organization nor expertise in this field. During recent reorganization discussions in Congress, Weeks had submitted this proposal to the lawmakers.³

Actually, it had been Alaska's Governor Scott C. Bone who had suggested that the Alaska Road Commission be abolished, but at the same time he had requested that Congress include the Territory in the Federal Aid Highway Act of 1916 and its various subsequent amendments which funnelled federal monies into road construction activities in the states and territories according to a complex matching formula involving population, size of the state or territory, and the acreage of the public domain in each jurisdiction. Congress had excluded Alaska from this legislation, ostensibly because the territory's vast area would have entitled it to receive an unduly large share of the total appropriation made under the act. Legislation introduced into the Senate and House in 1925 for the reorganization of the Administrative branch of the government abolished the Alaska Road Commission and transferred its duties to the Department

of the Interior, while at the same time including the Territory to share in all appropriations available for apportionment under the Federal Aid Highway Act.⁴

Alaska's delegate to Congress Dan Sutherland was unhappy with the proposal, and appealed to Secretary Weeks to exert himself on preserving the Commission. If the section of the measure abolishing the Alaska Road Commission could not be deleted, he asked that the War Department offer an amendment providing for the continuation of the Commission's work under the supervision of engineer officers detailed from the Army. Sutherland reminded the Secretary that appropriations for roads and trails in Alaska in 1920 had been barely sufficient to maintain the transportation system already constructed, much less develop new roads. In fact, progress in the transportation field had come to a standstill. Since then, however, the Chief of Engineers had persuaded Congress to gradually increase the annual appropriations, and for fiscal year 1926 that amounted to \$900,000. Sutherland had done his part aiding this effort. The Commission had regained considerable momentum after it had reorganized its structure after the war. It had aggressively enlarged the organization and acquired much new mechanical equipment; extended its facilities to other bureaus of the federal government as well as the territory; prepared an extensive road program, and with that program increased funding made some progress in accomplishing. To terminate the Commission at this point would be disastrous for Alaska, Sutherland maintained, and he asked that the Secretary further consider the matter before the legislation came up for a vote in Congress.⁵

The delegate had the support of Major General H. Taylor, the Chief Engineer. He reminded the Adjutant General that for several years attempts had been made to include Alaska in the Federal Aid Highway Act, always unsuccessfully. The House Committee on Roads had held several hearings on the matter, and representatives of the War and Agriculture Departments had testified. But the Department of Agriculture and committee members had been unwilling to extend the Federal Aid Highway Act to Alaska in a fashion acceptable to Delegate Sutherland, namely providing greater funds for road and trail construction than available under ex-

isting law. In the meantime, the Alaska Road Commission had performed its work, praised by the Bureau of the Budget and the House Committee on Territories. In annual appearances before the Appropriation Committees of both Houses of Congress, the Alaska Road Commission had won the confidence of both, evidenced in the modestly increased funds these committees had made available. From the military point of view, Taylor continued, Army officers serving with the Commission received valuable training for their duties in wartime in road and trail location and construction and exploratory and reconnaissance surveys under pioneer conditions. Better yet, these men performed economically and efficiently essential work of permanent value.⁶

Taylor particularly objected to the abolition of "a going concern" with no concrete plans for anything to take its place. Nobody knew how the Secretary of the Interior intended to handle territorial road work, but it was known that he had "no personnel nor organization in Alaska equipped to take it over". Worse yet, the proposed legislation made no provision for safeguarding the system of military roads and trails which the War Department had constructed during the past twenty years. Taylor also criticized that section of the proposed legislation which transferred control from the Commission that was resident in the territory with full authority to meet emergencies and handle business on the spot without having to wait for permission from Washington, to a department in the capital "with all the attendant delays that are such a conspicuous feature of the usual handling of Alaskan affairs...." In fact, the Committees on the Territories for several years had been considering plans for centralizing control of all federal affairs relating to Alaska. Instead, the proposed legislation abolished the only federal bureau without long-range and unbusinesslike control from Washington.⁷

Taylor criticized the proposed measures from yet another angle, namely that they were uneconomical, because at least two organizations, and perhaps even four, reporting to different departments, would have to be created if these bills passed. He praised the Commission for handling other engineering work for which funds were provided. These included River and Harbor work for the Chief of Engineers, handling the water

supply at the Army's Chilkoot Barracks and administering the Sitka military cemetery for the Quartermaster General; the Commission also managed the Sitka National Monument and developed roads in Mt. McKinley National Park for the National Park Service; and finally, the Alaska Road Commission performed needed work for various municipalities and built roads, bridges, trails, and shelter cabins supported by territorial legislative appropriations. In short, inasmuch as the existing organization had fully proved its versatility, effectiveness and economy, Taylor recommended the maintenance of the status quo. After some internal soul searching, Secretary Weeks reconsidered his previous views and advised Congress that the abolition of the Alaska Road Commission would be premature, because throughout America's frontier history the War Department had performed work of a similar character to that of the Alaska Road Commission in opening up the West. Alaska still was a remote frontier, and it would be years before it reached a development stage comparable with that found in the contiguous states. In view of these facts, and the expressed desires of Alaskans, Secretary Weeks declared that his Department was willing to continue to sponsor the work of the Alaska Road Commission.⁸

Weeks might have added that much of the agitation for the abolition of the Alaska Road Commission came from advocates for a centralized Alaskan transportation administration within Congress as well as the Department of the Interior that had constructed the Alaska Railroad and now operated it. In 1923, the administration of President Warren G. Harding had consolidated the functions of the railroad and the Commission. As previously stated, Colonel James G. Steese, the president of the Commission, directed the merged transportation activities. By the end of the year, the two organizations had broken apart again, primarily because little hope existed for a permanent merger, and the differing natures of rail and road created internal problems. Geography confined train operations, and railroad maintenance was a year-round necessity. The Alaska Road Commission had far-flung responsibilities, but much of its work was intensely seasonal. The two organizations thus operated on different cycles. The merger, however, was one of many efforts to rationalize the federal bureaucracy in Alaska.⁹

In fact dissatisfaction with Alaska's laggard development reached back to a period following the American purchase of Russian America, when Sitka citizens had complained about the lack of economic development. Finally, in 1913, Secretary of the Interior Franklin K. Lane called for a local development board. Thereafter, the Department of the Interior and its Congressional friends urged a reorganization of the federal bureaucracy in Alaska. A variety of draft bills established a board comprising major bureau heads and other federal officials who could radically rearrange bureau activity and make other decisions subject only to the approval of the Secretary of the Interior. Historian William H. Wilson has stated that "insofar as these proposals recognized the need for a special, coordinated approach to northern lands, they were enlightened and progressive. Had their sponsors confessed that Alaska required a unique federal policy because of its particularly difficult climate, terrain, and geographical relationships, their candor might have carried the day" but rather than doing so, they argued that bureaucratic red tape had frustrated and defeated the efforts of the many hardworking and ambitious pioneers. In addition, journalists attacked federal bureaucrats routinely in the popular press for their indecisiveness and obstructionist methods. These insulting barrages about bureaucratic staff and methods were resented and added to the fears of bureaus threatened with a loss of their autonomy. From 1914 through the early 1920s, the bureaus worked with their Congressional sympathizers to ward off several development board bills. In the meantime, the Department of the Interior tried various temporary administrative solutions. Secretary John Barton Payne, Lane's successor, established an Alaska Advisory Committee which included representatives of his own department, the Post Office Department, the Department of Agriculture, and the Shipping Board. This committee studied reports, held hearings in Seattle, and submitted its recommendations for territorial development. Among these was one for the creation of a Permanent Interdepartmental Alaska Committee to be located in Washington. The committee was to include, in addition to the members of the Advisory Committee, representatives from the War, Navy, Agriculture, and Commerce Departments. Alaska's governor was to serve

in an ex-officio capacity, and it was to be chaired by a representative of the Department of the Interior. The Departments agreed, so Secretary Payne established the Committee with the approval of President Woodrow Wilson in December, 1920. Subsequently, this new entity met occasionally and made recommendations, but it lacked real authority. The Harding administration retained it, and renamed it the Alaska Interdepartmental Committee. In 1922 a local Alaska Council was appointed, which proved to be as ineffectual as the Washington Committee. Finally, at the request of Secretary of the Interior Hubert Work, President Harding abolished the Interdepartmental Committee in April 1923.¹⁰

It is against this background that one has to view the efforts of the Department of the Interior to assume the functions of the Alaska Road Commission - namely the desire to streamline and combine related responsibilities in one department. The Department of the Interior worried particularly about the continued deficits of the Alaska Railroad for which it was responsible, and despite drastic economy measures applied by the manager, Colonel Otto Ohlson, Congress applied heavy pressure for further cutbacks. In August 1931, the Special Select Committee on Investigation of the Alaska Railroad named the Howell Committee after its chairman, Senator Robert B. Howell, arrived in the Territory. The Committee's report was critical of the railroad's management and skeptical about its economic future. Senator Howell in particular argued that since no significant development had taken place along the railbelt, the line's success or failure should be judged by profit and loss alone.¹¹ The report revealed the railroad's many problems, and one among these was the trucking competition across the Richardson Highway from Valdez to Fairbanks. In order to cut this competition, the Department of the Interior proposed tolls be imposed for the use of the Richardson Highway. The way to impose tolls was to take over the Alaska Road Commission from the War Department.

Eventually, the administration of President Herbert Hoover prepared legislation for the transfer of the Alaska Road Commission to the Department of the Interior and asked Senator Howell and Representative Edward T. Taylor to introduce the legislation in their respective chambers.

This they did. The Senate passed the measure unanimously and the House passed the bill as well. Taylor praised the work of the Army engineers, but stated that the time had come to consolidate and systematize federal activities in Alaska. The transfer of the Commission was a first step in the right direction. Officials in the executive department had carefully considered into which department the Alaska Road Commission would fit best. Taylor argued that when members of Congress realized that the Interior Department has the public domain, "about 98 percent of this territory, the Mount McKinley National Park, the reindeer, the Alaska railroad, the governorship, the legislature, and the larger proportion of all the activities of Alaska in that department, the President and his Cabinet officers decided that this work should be transferred from the war Department to the Interior Department."¹²

Some members of Congress suggested that it might be best to consolidate road building activities in the Bureau of Public Roads, but deferred to administration desires in the matter. The House Committee on Territories considered the measure favorably in May 1932. Secretary of the Interior Ray Lyman Wilbur stated that the transfer was advisable "if we hope to succeed in our efforts to place the Alaska Railroad on a self-sustaining basis." Still another consideration in favor of the transfer was that it would enable Congress to review the budgets for the main transportation systems in Alaska in one department, because now the railroad, river, and highway systems would be under central administrative control and expenditures could be properly correlated. Wilbur promised no curtailment of the road building program for Alaska as a result of the transfer, a promise made to still fears many Alaskans had expressed to members of Congress.¹³

Secretary of War Patrick J. Hurley remarked that "while it is believed that the activities referred to have been efficiently and economically administered under existing law," his department had no objections to the transfer. However, Representative Edward T. Taylor, who had authored the House measure, was curious to learn how the Department of the Interior proposed to carry out its new duties. Secretary Wilbur testified that he intended to assign the administration of the Commission to Alaska's

governor, an employee of the department who was located in Juneau as were the headquarters of the Commission. The War Department normally assigned six army officers to the Alaska Road Commission, although there were only five in 1932. In addition, a few civilians were permanent employees, occupying positions such as senior engineers, superintendents and assistant superintendents, disbursing clerks, foremen and mechanics, among others. There also were some ninety-nine temporary employees, many of whom had worked for the Commission for many construction seasons. Payroll expenses for permanent employees in 1931 amounted to \$109,920, with an estimate of \$110,770 and \$111,540 for 1932 and 1933, respectively. The salaries and wages for temporary employees for 1931 had come to \$817,463, and with estimates of \$762,275 and \$600,505 for 1932 and 1933, respectively. Secretary Wilbur intended to maintain as much of the existing civilian organization as possible with the prospective reduced appropriations, but he planned to relieve the Army officers of their duties.¹⁴

Wilbur's testimony satisfied Representative Taylor, who was of the opinion that there existed "an unnecessary amount of government of Alaska by too many departments, bureaus, boards, commissions, and officials," and he thought that much of this should be gradually and systematically consolidated, combined, and coordinated wherever reasonably possible. Such a course, Taylor and the Committee believed, would be in the interest of the federal government and would speed the orderly development of Alaska.¹⁵

The Senate Committee on Commerce also reported the transfer measure favorably. The Senators, however, stressed that truck competition over the Richardson Highway would increasingly affect the Alaska Railroad adversely. Therefore, besides transferring the Commission, the measure also authorized the Secretary of the Interior to fix and collect tolls on the Richardson Highway "where necessary or available in the public interest."¹⁶

Colonel Otto F. Ohlson already had warned Fairbanks merchants that they were unwise in "patronizing temporary fair-weather competition of the railroad that did not contribute to the upkeep of Fairbanks." He reminded members of the Fairbanks Commercial Club that the railroad had

been built "for the people of Alaska and for the purpose of developing the Territory, and that they needed it." Ohlson told his listeners that the railroad spent between one to two million dollars annually; that it rendered expensive service in the winter, operating rotary snow plows in order to get the trains through; and that unless the inhabitants of the railroad belt did not give their loyal support to the railroad, "there was a possibility of it being closed down during the wintertime, necessitating merchants having to lay in a 7-month [sic] supply which they could not afford to do in these times because of lack of capital and credit." Continuous service required patronage in the summer as well as in the winter, Ohlson had concluded.¹⁷

Secretary Wilbur told the Senators that he had not urged the transfer "as a matter of economy in road building but to make possible a smaller deficit on the Alaska Railroad and in the interest of effective coordination of related activities now handled by two departments." He once again stated that Alaskan citizens and organizations need not be afraid that his department would neglect the road building program in the north, nor would civilian administration be more expensive than the military one. In fact, he concluded, "it would be our endeavor to continue the efficient operation now maintained by the War Department."¹⁸

Both houses of Congress passed the transfer bill, and the Alaska Road Commission became a part of the Department of the Interior, effective July 20, 1932. For twenty-eight years the Commission, under the supervision of the War Department, had labored diligently to construct a basic transportation network. The work in Alaska had offered invaluable experience in northern construction problems to many young Army officers. Alaskans had greatly benefited from the dedicated labors of the organization, and although there had been occasional criticism, the majority of northern residents approved of the Commission's efforts. During its last year of operation under the War Department, the Commission had largely attempted to maintain the existing transportation network, and to improve the more important routes for the use of motor vehicles. Inadequate appropriations had confined new construction to a few major projects which already had been underway for a number of years. The

Commission had built 40.15 miles of new roads, 20 miles of sled roads, 130 miles of trails, 520 linear feet of bridges with over 60-foot span, 3,158 linear feet of trestle span bridges, 1 airplane landing field, and 4 shelter cabins. The Commission reconstructed 75.6 miles of road, surfaced 107.37 miles of road, and replaced numerous culverts. In addition, it maintained 1,304.13 miles of road, 74 miles of tramway, 813.5 miles of sled road, 4,732.25 miles of permanent trails, 329 miles of temporary flagged trails, 26 airplane landing fields, and 36 shelter cabins.¹⁹

By 1932, the Alaska Road Commission had constructed a transportation system of 11,231 miles consisting of 1,627.5 miles of roads, 74 miles of tramroads, 1,495.5 miles of sled roads, 7,322 miles of trails, and 712 miles of temporary flagged trail. Between 1905 and 1932, the Commission had expended a total of \$18,312,825.40 from all sources, but War Department appropriations accounted for \$11,895,928.42 of this total.²⁰

The Commission headquarters were at Juneau, and it also maintained a suboffice in Washington, D.C. It had divided the territory into seven districts and one subdistrict. A superintendent in each district directed the work of the local foremen. Employees of the Commission all were experienced men who, in nearly all cases, had served the organization for many years. The Commission, because of the high cost of labor, had purchased much mechanical equipment over the years, enabling it to handle engineering construction anywhere in the territory.²¹

In short, the transfer ended an important era in Alaska's transportation history and the beginning of another. In 1932, however, nobody could foresee what the new era would be like, nor could anyone guess the bitter controversies which were to arise over the imposition of tolls on the Richardson Highway.

FOOTNOTES

1. Bliss to Secretary of War, February 6, 1917, Records of the Adjutant General's Office, 1780's to 1917, AGO Doc File, various files pertaining to Alaska, R. G. 94, N.A.
2. Richardson to Board of Road Commissioners for Alaska, November 3, 1923, RG 30, ARC, box 65481, Federal Records Center, Seattle, Washington.
3. Gotwals to Richardson, November 20, 1923, R.G. 30, A.R.C., box 65481, Federal Records Center, Seattle, Washington; Weeks to Representative Louis C. Cramton, December 19, 1923, R.G. 94, Records of the Adjutant General's Office, 1780s to 1917, AG Doc File, various files pertaining to Alaska, N.A.
4. 39 Stat. 355, July 11, 1916; 42 Stat. 212, November 9, 1921; G. 3445 and H.R. 9629, 1925.
5. Sutherland to Weeks, January 28, 1925, Taylor to Adjutant General, February 3, 1925, R.G.94, Records of the Adjutant General's Office, 1780s to 1917, AF Doc File, various files pertaining to Alaska, N.A.
6. Ibid.
7. Ibid.
8. Ibid.; Weeks to Mapes, February 12, 1925, JR.G. 94, Records of the Adjutant General's Office 1780s to 1917, HGO Doc File, various files pertaining to Alaska, N.A.
9. Wilson, Railroad in the Clouds, pp. 156-159.
10. Ibid., pp. 155-156.
11. Ibid., pp. 198-199.
12. Conf. Record, 75C., 1 S., pp. 14076-14077 (June 27, 1932).
13. U.S. Congress, House, To Transfer the Administration of the Board of Road Commissioners in Alaska from the War Department to the Department of Interior, H. Rept. 1444 to accompany H.R. 11717, 72 C., 1 S. (Washington: Government Printing Office, 1932). pp. 1-2.
14. Ibid., p. 2.
15. Ibid., p. 3.
16. U.S. Congress, Senate, Providing for the Transfer of the Duties of the Board of Road Commissioners in the Territory of Alaska to the

Department of the Interior, and for other purposes, Senate rept. 753 to accompany S. 4525, 72C., 1S. (Washington: Government Printing Office, 1932), p. 1.

17. Ibid., p. 2.
18. Ibid., p. 3.
19. Alaska Road Commission, Twenty-Eighth Annual Report of the Alaska Road Commission, Fiscal year 1932, Upon the Construction and maintenance of military and Post Roads, Bridges, and Trails; and of other roads, Tramways, Ferries, Bridges, Trails, and Related works in the Territory of Alaska (Washington: Government Printing Office, 1932), p. 2.
20. Ibid., pp. 5-7
21. Ibid., pp. 3-4
22. The following describes the organization which the Department of the Interior, together with the governor of Alaska, worked out:

The Honorable

The Secretary of the Interior

My dear Mr. Secretary:

Transmitted herewith is an Organization Chart of the Alaska Road Commission and a list of permanent employees showing the salaries and classifications in which they have been carried by the Alaska Road Commission.

Under your order, No. 585, July 1, 1932, Mr. Ike P. Taylor was designated as Acting Chief Engineer.

The Organization chart shows an Assistant Chief Engineer, which corresponds to the position formerly held by Mr. Taylor and which is essential to the proper functioning of the organization. This position has not been filled but there are letters in the mail requesting the appointment of Mr. Hawley Sterling, who is eminently qualified for the position but who is now employed in a temporary capacity because of difficulties with the Civil Service Commission who have declined to certify him and insisted that a selection be made from the eligible list on file with the Civil Service Commission in Seattle. If it is impossible to designate Mr. Sterling, we wish to select one of the other Field Superintendents for this position and will submit appropriate recommendations on receipt of a decision regarding Mr. Sterling.

In the Juneau office Mr. Gustavus H. Skinner is Chief Clerk. He has occupied this position for many years is thoroughly familiar with every phase of the activities and is eminently qualified to discharge his duties. He is the only employee in the organization who can discharge these duties and his continuation in that position is earnestly recommended. The other clerks in the Juneau office are Arthur Adams, Mrs. H. L. Jewett, Gertrude K. Waltonen, Mrs. Ideal Wildes, Edna M. Smith and Harry E. Brown. They should be continued in their present positions for the time being and until we have had time to determine whether or not their services are necessary to perform the required work. The list of employees shows Lance E. Hendrickson as Senior Draftsman in the Juneau office. Mr. Hendrickson has been employed in a dual capacity under the Rivers and Harbor work and the Alaska Road Commission. He is not listed in the Organization Chart for the reason that it seems probable that there will not be any necessity for such position after the close of the present field season. We desire further time to consider the division of the duties which must occur, in view of our reorganization, before making definite recommendations. He should be continued on the roll in his present capacity for the time being. In addition to the employees listed, there are between 300 and 500 temporary employees, consisting of foremen, skilled and unskilled laborers, cooks, warehousemen and truck drivers. This number varies each day. Reports will be made each month showing the total number on the rolls.

The position of Locating Engineer is held by Mr. Donald MacDonald of Fairbanks. His duties require him to make surveys of new projects and resurveys of existing projects where changes are contemplated. He is carried on the roll as Associate Engineer. So far as can be determined at the present time there is sufficient work to justify his continuation.

Mr. John Coats, with headquarters at Chitina, is master mechanic. His duties require him to supervise the maintenance and repair of all of the motorized equipment of the Road Commission and in this capacity he is required to visit each district where equipment of this character is used. He is well qualified for these duties and his services are necessary.

Valdez District - (Headquarters, Valdez) -
Thomas H. Huddleston, Superintendent

Mr. Huddleston has been with the Commission for a great many years and is well qualified for his position. The Valdez District embraces the Richardson Highway from Valdez to Willow Creek and a number of other small projects. Mr. Earl C. Simmons is Disbursing Clerk for the Valdez District. In each district where a large number of seasonal and temporary employees are engaged, it is absolutely necessary to have a Disbursing Clerk so that the employees may be paid promptly at the termination of their services.

Southwestern District - (Headquarters, Anchorage) -
Morgan C. Edmunds, Superintendent

This district embraces the area tributary to the Alaska Railroad, Mt. McKinley National Park and the Alaska Peninsula. Mr. Edmunds has been with the Commission for many years and is well qualified. Mr. Anton Eide is at present Assistant Superintendent. His salary, however, is being paid from a special appropriation for the maintenance of the Lowell Creek project at Seward and it is anticipated that within the next two or three months the work will be completed, and, under the law, no further appropriations can be made for this project, hence, he will be retired since he has reached retirement age. At the present time it is not contemplated that this position will be filled on Mr. Eide's retirement. Mr. Fred J. Spach, with headquarters at Anchorage, is Assistant Engineer. He is well qualified and functions as assistant to Mr. Edmunds. His services are necessary. Mr. John A. Borges is Deputy Disbursing Clerk and has functioned in this capacity for many years. He is well qualified and should be continued in his present capacity.

Nome District - (Headquarters, Nome) -
Ross J. Kinney, Superintendent

This district embraces the projects on the Seward Peninsula. Mr. Kinney has been with the organization for a great many years and is well qualified and thoroughly familiar with all of the projects and the policies of the Commission. He should be retained in his present position. Mr. D. E. Dunbar is Disbursing Clerk and has discharged his duties in a satisfactory manner. He should be retained.

Chitina District - (Headquarters, Chitina) -
Robert J. Shepard, Superintendent

Mr. Shepard has been with the Alaska Road Commission in various capacities for a great many years and is well qualified to perform the required duties. Mr. Frank Shipp is Assistant Superintendent. He is an old employee and will be eligible for retirement in a short time. From the information at hand it appears that with the retirement of Mr. Shipp, and until there is an increase in our appropriations, it will not be necessary to fill his position. Mr. William J. Niemi is Assistant Engineer and is well qualified for his position. It is anticipated that if we do not fill Mr. Shipp's position on his retirement many of the duties will be assigned to Mr. Niemi. Dean H. Kelsy, Deputy Disbursing Clerk, has been with the Commission for many years and should be continued. Russell J. Sullivan is shown as storekeeper. His services are necessary during the season of operations, but it is intended to furlough him at the end of that time and re-employ him again, if available, at the beginning of next season's operations.

Fairbanks District - (Headquarters, Fairbanks) -
Mr. Frank Nash, Superintendent

Mr. Nash has been associated with the Commission for many years and is well qualified for his duties. He should be continued in his present capacity. Clarence E. Burglin, Assistant Engineer, is one of the younger employees of the Commission, but he has discharged his duties in a very satisfactory manner and should be continued in his present capacity. Mr. Peter Grandison, Disbursing Clerk, has functioned in this capacity for many years and should be continued. Vincent H. Pierce is Clerk for the Fairbanks District. He should be continued in his position until it can be ascertained whether or not his services will be required in performing the work authorized under the present appropriations. Russell R. Robinson is shown as storekeeper and he has been employed in this capacity in the past and was given the rating by the Civil Service Commission. In view of the reduced appropriations, he was not continued as storekeeper this year but is working as a laborer in one of the road crews. Fairbanks is one of the most important stations, and while the services of a storekeeper are not required at the present time and the position is not filled, it is deemed advisable to keep the designation.

Kuskokwim District - (Headquarters, McGrath)
Mr. Hawley Sterling, Assistant Superintendent

Mr. Sterling is not carried on the list of permanent employees because he is employed under a temporary appointment. This position will be discontinued at the close of the present working season and hereafter a foreman will be detailed to have charge of the work.

Southeastern District - (Headquarters, Juneau) -

This district embraces the territory in Southeastern Alaska and a sub-district which included Eagle on the Yukon River. Each year a foreman is employed to supervise the work in that region. The other activities of the Commission in the Southeastern District are administered through the headquarters office.

Very truly yours,

Governor

ORGANIZATION CHART
ALASKA ROAD COMMISSION

SECRETARY OF INTERIOR

GOVERNOR

Disbursing Clerk

CHIEF ENGINEER

ASST. CHIEF ENGINEER

JUNEAU OFFICE
Chief Clerk
6 Clerks

LOCATING ENGINEER
MASTER MECHANIC

VALDEZ DISTRICT
Superintendent
Disbursing Clerk

CHITINA DISTRICT
Superintendent
Asst. Superintendent
Asst. Engineer
Disbursing Clerk

SOUTHWESTERN DISTRICT
Superintendent
Asst. Superintendent
Asst. Engineer
Disbursing Clerk

FAIRBANKS DISTRICT
Superintendent
Asst. Engineer
Disbursing Clerk
a Clerk

NOME DISTRICT
Superintendent
Disbursing Clerk

KUSKOKWIM DISTRICT
Asst. Superintendent

SOUTHEASTERN DIST.
Eagle Sub District
General Foreman

R. G. 126, Central Classified Files, 9-1-55, N.A.

CHAPTER TWELVE

TOLLS ON THE RICHARDSON HIGHWAY

For years, Congress and the federal government had been dissatisfied with Alaska's uneven, slow development. As early as 1913 Secretary of the Interior Franklin K. Lane had called for the creation of an Alaskan development board. Subsequently, Interior and its Congressional friends urged a reorganization of the federal bureaucracy in the north. Many draft bills established a board comprising major bureau and agency heads and other federal officials who could recast federal activities in a major fashion and make other basic decisions subject to the approval of the secretary of the interior. Misunderstandings on the part of Congress and infighting among bureaucrats doomed these efforts, however, and while Congress struggled with the concept of development boards, Interior tried temporary solutions, which led to the consolidation of The Alaska Railroad and the Alaska Road Commission in the spring of 1923. By May of that year the Railroad and the Road Commission used each other's men, equipment, and supplies interchangeably.

Alaska Road Commission and Alaska Railroad Merger

James G. Steese directed the merged transportation agencies. With a trim build, neatly dressed and sporting a trim mustache, Steese at forty-one was a successful career officer. A West Point graduate of the class of 1907, he had served four years in Panama during the construction days. He taught several years at West Point and Forts Riley and Leavenworth and became the assistant chief of engineers. Promoted to full colonel in 1918, he won an appointment to the general staff, and in July 1920 assumed the presidency of the Alaska Road Commission. As a bachelor without a family to yearn for warmer climates, Steese was very well fitted for duty in the north.¹

Steese was pleased with the merger, and thought that it immediately speeded development work according to a unified plan, and better yet, decisions could quickly be made in the field. Six months later, in

October 1923, the consolidated operations ended. The Railroad had many problems, and probably the most important was the line's poor condition. Upheavals in management continued to shake the Alaska Railroad, and its troubles did not end until the appointment of strong-willed and industrious Otto F. Ohlson as general manager in 1928. In response to heavy Congressional pressures for economy, Ohlson ran a tight operation. He consolidated sections and discontinued stations, bought used rolling stock, and most importantly, raised freight rates to the ire of Alaskans. Soon, Ohlson fought competing trucks, buses, boats and airplanes, mostly in the summer for the tough winters made operations for all but the Railroad nearly impossible. The competition hauled almost entirely high-value perishables, first class freight, and passengers. Competition started in earnest in 1931 after Congress had mandated drastic rate increases designed to put the Railroad on a self-sustaining basis. Competition continued despite the Railroad's low summertime rates and a system of licensing and tolls on the Richardson Highway. And as competition continued, its emotional context expanded until truckers became the heroes, and Ohlson and the Railroad the villains, of Alaska transportation.²

Source of Authority

Only as a last resort did Ohlson accept the idea of a toll on highway tonnage. The Department of the Interior received its authority to regulate traffic and impose license fees and tolls in the 1932 transfer of the Alaska Road Commission from the War Department. Now, one administrative head possessed the power to control the competition between traffic on the Richardson Highway and the Alaska Railroad. The Act also contemplated an equilization of rates between the railroad and the highway transportation system so that the latter would not encourage the diversion of passenger and freight traffic from the railroad to the highway. Until the transfer in 1932, no formal regulations governed the speed, weight, or type of vehicle on Alaska's roads. Regulations were needed to protect the system, particularly during the soggy breakup

season when roads became very soft, against the ever more powerful and heavier cars, buses, and trucks. On February 15, 1933 the secretary adopted regulations governing the use of the Richardson Highway. Subsequently amended on June 13, 1933, they were designed to accomplish three goals: 1) regulate the weights of vehicles; 2) the size of vehicles; and 3) set up a registration and license system requiring all vehicles to be registered and pay a license fee. The purpose of the registration and license fees was to aid in the maintenance of the road and reduce the competition of the highway over which common carriers operated in direct competition with the railroad. Failure to comply with the regulations established by the Secretary of the Interior would perhaps have constituted a crime. However, since the Act contained no express language on the subject, the courts probably would not have sustained any attempt to make a violation a basis for prosecution.³

Governor Parks Confused

Alaska's Governor George A. Parks was confused about the various proposals by the Department of the Interior to issue new rules and regulations. Nobody had informed him, and whatever information he possessed had been obtained from press notices. Parks guessed, however, that these proposals were designed to equalize the rates of the Alaska Railroad and those charged by carriers on the Richardson Highway. The governor predicted that it would be difficult to fix tolls. For example, bus companies operating between Fairbanks and Valdez charged ten dollars for a one-way ticket at the height of the competition in 1932, while the railroad cost forty-seven dollars from Seward to Fairbanks. Many Alaskans lived along the highway and traveled a great deal. Obviously, they did not compete with the railroad. Additionally, several hundred individuals from Fairbanks and coast points made weekly trips along the highway for recreational purposes. Many Fairbanksans owned summer cabins at Harding and Birch Lakes some sixty miles south of Fairbanks, and others traveled to Paxson's Lodge on fishing excursions, a point almost half-way between

the terminals. All of these people did not compete with the railroad, and therefore should not have to pay tolls. Furthermore, imposing tolls suggested that the government assumed the obligation to keep the road open at all times for traffic. Would claims accrue against the Government in the event of wash out or slides? This might delay traffic for several days and cause carriers who had paid tolls at Valdez to lose loads of perishables.⁴

This was not all, however, for how should tolls be collected? the governor asked. During the summer period with practically continuous daylight traffic was underway at all hours of the day and night. The law restricted employees to eight working hours per day. Since preliminary investigation revealed that tolls would have to be collected at two points along the highway, this necessitated stationing three men at each station unless the road was closed for a certain period each day. In conclusion, Parks recommended that Ohlson be instructed to direct his traffic manager to study the problem carefully and cooperate with the governor's office in preparing recommendations for approval by the Secretary of the Interior.⁵

The Department of the Interior Confused

If the governor was confused, so was the Department of the Interior. E. K. Burlaw, the administrative assistant to the Secretary, maintained that local traffic should not be charged but only buses and trucks acting as common carriers in competition with the railroad and tolls should be collected through a license system because hiring a collection staff would be too expensive. Colonel Ohlson traveled the highway in early July and reported that the low rate of \$10.00 in effect at the beginning of the season had been increased to \$25.00 for a one-way ticket Valdez - Fairbanks or Chitina - Fairbanks. Since the railroad charged \$47.05 for a one-way trip from Seward to Fairbanks, the proposed toll had to be the difference of \$22.05 to be effective. However, such a measure, however, he warned would trigger serious protests and antagonistic feelings among northern residents. Echoing Governor Parks,

Ohlson stated that Alaskans would argue that the imposition of tolls would obligate the government to maintain the highway in good condition. Ohlson asked that he be permitted to lower the freight and passenger rates to Fairbanks to a competitive level while the Richardson Highway was open during the warm season.⁶

Interior Recommendations

By the end of August, 1932 Interior made the following recommendations as to the administration of tolls on the Richardson Highway:

1. That the Department proceed with due caution as to precedent regarding highway tolls, giving regard to present practice on toll highways and bridges.
2. That pleasure cars on single trips, as well as residents along the highway, should not be charged tolls.
3. That tolls be charged buses, trucks, or any type of common carrier for hire.
4. That tolls should not be charged to the extent of the amount needed to make the railroad competitive with highway traffic or freight haulage. No attempt should be made to equalize rates between the railroad and the highway.
5. Tolls, where charged, should be collected through a system of licenses, eliminating the necessity of a collection staff.
6. To make railroad haulage rates competitive with highway haulage, lower freight and passenger rates should be used during the season the highway is open.

Both Governor Parks and Colonel Ohlson considered these recommendations, but rejected all except the last one as impractical. Instead, both men advocated regulations governing the size and weight of all vehicles and the speed of all traffic. Such regulations, properly enforced, would reduce maintenance costs and render freight transportation from Valdez to the interior unprofitable with the exception of certain perishable goods. These traffic regulations, together with lower railroad freight and passenger rates during the warm season would solve the problem.⁷

In early December 1932 Interior had decided to follow the suggestions of the two men to draft regulations governing vehicle traffic on Alaskan roads. But it also desired to include a schedule of registration and license fees for commercial passenger cars and trucks operating on the Richardson Highway. In the preliminary draft no wheeled vehicles exceeding 10,000 pounds gross weight, including load, were allowed to operate on Alaskan roads. Vehicles were restricted to 7.5 feet in width and 20 feet in length, including trailers. This provision was to protect the roads, particularly during spring break-up when heavy trucks had caused serious damage. Alaskan bridges were none too sturdy, and therefore Interior restricted the moving load on any bridge to be no greater than 20,000 pounds for any vehicle having a length of not less than 14 feet. No more than two successive loads were allowed on any span bridge at once. In addition, motor vehicles were to be operated at a safe speed and in a safe manner. No truck weighing in excess of 6,000 pounds was to drive faster than 25 miles per hour.⁸

Vehicle Permits

Every motor vehicle operating on the Richardson Highway was to obtain a permit for a nominal fee of one dollar. In addition, each vehicle was to pay a license fee, the amount depending on its classification. Class A vehicles, which included all conveyances used for commercial or pleasure purposes not listed in classes B and C were exempt. Class B vehicles carrying from five to fifteen passengers were to pay license fees ranging from \$100 to \$175, depending on size. Class C vehicles up to 7,000 pounds gross weight were to pay \$100, those above 7,000 pounds but below 10,000 pounds were to pay \$150, and finally automobiles operating as Class B up to a weight of 7000 pounds were to pay the minimum charge for their class, plus an additional \$100. Shortly thereafter, the solicitor of the Department of the Interior discovered that there was no statute which provided penalties for the violation of these new regulations. He suggested that the department draft a measure for Congressional approval correcting this oversight.⁹

The 1932 Democratic Landslide

In the meantime, American voters rejected the Republicans in the 1932 elections and chose Democrat Franklin D. Roosevelt as the new chief executive. Roosevelt's secretary of the Interior, Harold L. Ickes, inherited Alaskan problems, including the regulations governing automobile traffic in the north and the imposition of license fees for use of the Richardson Highway. Ickes agreed with his predecessor's actions, and in reply to a protest from the City Council of Fairbanks stated that American taxpayers for many years had paid the deficits incurred by the Alaska Railroad. He could see no apparent reason why the federal government should maintain a highway which further reduced railroad revenues. And although the fees to be charged did not cover the maintenance of the highway, nevertheless the monies collected helped reduce the subsidy somewhat and above all would "show an effort on the part of the people of Alaska to share in the expense now carried completely by the taxpayers of the States."¹⁰

Delegate Dimond Unhappy With Tolls

Alaska's newly-elected delegate to Congress, Anthony J. Dimond, was unhappy with the imposition of license fees or tolls for the use of the Richardson Highway. Dimond, a tall, powerfully built individual had grown up on his father's farm near Palatine Bridge, New York. Born in 1881, he finished high school in Amsterdam, New York, and completed an additional fifth year of schoolwork which qualified him as a teacher. Working on the farm, he taught an eight-grade country school during the winters, studied Latin and mathematics and also read law for about three years under the supervision of an Amsterdam attorney. In 1905, Dimond came to Alaska where he worked as a prospector, miner, teamster and waiter. In 1911, a hunting accident which nearly cost him his life left Dimond permanently with osteomyelitis, an infection of the bone, then incurable. Realizing that his prospecting career had ended, Dimond resumed the study of law and was admitted to the Alaska Bar in mid-

December, 1912. Appointed U.S. Commissioner at Chisana, center of a recent gold strike, he became a law partner in a Valdez firm in 1914. He participated in civic affairs in Valdez and eventually won a seat in the territorial senate. In 1932 he ran for the delegateship against James Wickersham and routed the incumbent in the Roosevelt landslide.¹¹

The new delegate told Secretary Ickes that the whole scheme of imposing registration and license fees should be set aside and "no further order or regulation made except such as may be necessary to prevent the use of the road by trucks or cars as might not be suitable for the type of road which exists." In fact, instead of trying to prevent the use of the highway through fees and tolls, the Department of the Interior should encourage the use of the railroad by lowering its passenger and freight rates. Ickes was not moved by the delegate's arguments and repeated his belief that the federal government should not be required to build and maintain a highway to compete with its own railroad which operated at a loss. Indeed, Ickes thought that the fees should be extended to cover private passenger cars, as well as privately owned trucks carrying merchandise for their owners. Accordingly, Ickes informed the delegate, he had amended the regulations to embrace private passenger cars and trucks.¹²

Ickes Chastises Troy

Ickes had consulted Alaska's new Democratic Governor, John W. Troy, on the automobile license fees for the use of the Richardson Highway. Troy had opposed the fee system, and on July 6, 1933 Ickes read an editorial in the Daily Alaska Empire entitled "An Unjust Tax," criticizing the Department of the Interior and the Secretary. Ickes had been told that Troy owned the newspaper. As owner he presumably controlled editorial policy, and Ickes wanted to know how the Governor could reconcile this attack on the administration with the loyalty expected of a presidential appointee. The Secretary lectured Troy that as an employee of the Department of the Interior he was not permitted to criticize a federal policy once it had been established. Troy obviously did not

understand the temper of Congress, "although it has been expressed frequently and emphatically, with regard to Federal appropriations for Territorial support." Congress no longer wishes to subsidize Alaska, Ickes stated, and Alaskans had to realize that "self-support and the independence that goes with it is more important to their welfare than Federal 'hand-outs'....." In fact, even those who believed that the federal government owed "Alaska a living must affirm that a liberal subsistence has been provided for many years." The time had come, Ickes concluded, to measure the rights of Alaskan citizens against those of the taxpayers in the contiguous states and establish a mean "that is not disproportionate on either side."¹³ The Secretary obviously had forgotten that northern residents were American citizens and taxpayers, and not mere colonial subjects.

Troy Defends Himself

Governor Troy quickly assured the secretary that he no longer owned the newspaper referred to, and in fact had not read the offending editorial. And in case he no longer could loyally support the administration, Troy stated, he would immediately submit his resignation. Ickes seemed to be satisfied with Troy's assurances, and that settled the matter. In the meantime, however, the Juneau and Fairbanks Chambers of Commerce vociferously objected to the toll system, as did political and civic organizations as well as individuals who all called for the revocation of the regulations, claiming that while law abiding citizens paid the license fees, others deliberately avoided them without punishment. And indeed, without amending legislation so as to provide penalties for violating the secretary's regulations, the government could undertake no prosecutions.¹⁴ In the meantime, however, affected citizens complained.

Homesteader Warren Complains

Jack Warren, a homesteader near Fairbanks, was one such law-abiding

individual who had paid the \$101 license fee on his truck and six dollars for his car. Living twenty-four miles south of Fairbanks on the Richardson Highway, Warren cut and sold firewood in the city. He did not object to paying the license fee - if everyone paid equally and the regulation was enforced. But he knew of sixteen trucks which used the highway more than he did and yet their owners had avoided the required payment, enabling them to "profitably market their wood for less than I can, thereby getting all the business." Still other trucks traveled the entire length of the highway, competing with the railroad by carrying freight from Valdez. They did not pay, either. "Thus I pay a high freight rate for everything I use coming over the Alaska Railroad and then a high tax to get merchandise just twenty-four miles out on the highway," Warren complained to Ickes. He demanded redress for this outrage, for only a few had paid the fees "while the others laugh at you and your regulation and at us, the poor saps who did pay it."¹⁵ And while most motorists ignored the license fee requirements, the department also found that it was unable to enforce the provisions regarding weight, safety, and speed.

Very Little Money Collected

For all the dissatisfaction with the prevailing license fee system, the federal government collected very little money. For example, in 1933 some 113 class A vehicles paid a license fee of \$6.00 each for a total of \$678.00, no class B licenses were taken out, and only four class C were paid, three at \$101.00 each and one at \$151.00 for a grand total of \$1,132.00. Governor Troy readily admitted that the registered class A automobiles did not represent the total number of privately owned cars using the highway because the majority of owners simply did not bother to take out licenses. Several of these individuals not complying with the regulations had been reported to the U.S. District Attorney, but he had advised that he could not prosecute under existing laws. The Governor urged the Department of the Interior to obtain legislation providing penalties for the violators of the regu-

lations, because those who obeyed the law increasingly resented those circumventing it. As a matter of fact, Troy thought that reducing railroad fares would do much more to divert passengers and freight from highway competition than license fees could ever hope to achieve. Although the governor opposed the licensing system per se he realized that it appeared to be necessary, for the purpose of diverting traffic to the railroad. He therefore proposed that only trucks, busses, or passenger cars hauling freight and travelers from Valdez to Fairbanks or vice versa be licensed and that all other vehicles be freed from these fees. Troy mentioned that all through traffic on the Richardson Highway had to use the ferry crossing the Tanana River some seventy-three miles southwest of Fairbanks. It might be practicable to establish a toll collection facility at that point which would catch all commercial through traffic. Secretary Ickes liked the toll idea and asked the governor to work out a rate structure.¹⁶

Troy's Proposals

Troy thereupon proposed that all vehicles using the Richardson Highway be assessed a five-dollar annual registration fee, while commercial vehicles pay five dollars per passenger and two dollars per 1,000 pounds or fraction thereof for net loads. In the meantime, however, nothing could be done in collecting either licenses or tolls or in enforcing the regulations which had no enforcable penalty clause. The Department of the Interior appreciated the governor's suggestions, but had been unable to persuade Congress to define an offense and provide a penalty for the Richardson Highway situation. Furthermore, changing from a license to a toll system probably would have to be approved by the president, and still would not cover the use of the road at either end.¹⁷ The question of the license fees was becoming very complicated, indeed.

Get The Traffic Back To The Railroad

Early in 1935, Ohlson and Ike P. Taylor, the chief engineer of the

Alaska Road Commission, attended a conference in Washington, and, together with other department employees, proposed to strike at the truckers where they could be hurt most. They adopted Governor Troy's scheme to collect a toll at the Commission-operated ferry across the Tanana River at McCarty, now Big Delta. Taylor recommended collecting a toll of 2.5 cents per ton-mile at the ferry. Thus the rate for one ton going the full distance was \$9.27, a charge which they believed would return some traffic to the railroad. Truckers could refuse to pay, and they could not be prosecuted for non-payment. But they could not cross the river until they paid. Secretary Ickes issued the new orders governing the "use of roads, trails, and other works" on March 25, 1935. They included the new tolls and deleted the license fees.¹⁸

Alaskan Continue Protests

The Valdez Chamber of Commerce and a sizable group of Fairbanks citizens protested the tolls even more vehemently than the fees. The Chamber denied that the Richardson Highway represented a threat to the Alaska Railroad since freight deliveries occurred only during the open season from June 15 to October 15. Only twenty percent of the total tonnage hauled over the highway during these short five months reached Fairbanks, while eighty percent were transported to Copper Center and other points adjacent to the highway not reached by any other transportation. The Chamber concluded that the tolls "are a rank discrimination entirely un-American and contrary to the usual procedure in the encouragement of the development of a pioneer country as no tolls are assessed on any other highway in Alaska." The Chamber pointed out that there were no plans to collect tolls on the highway under construction from Anchorage to the Matanuska Valley which paralleled the Alaska Railroad. The Fairbanks citizens claimed that the tolls were confiscatory, not in the public interest, increased the living costs for Interior residents, created unemployment, discriminated against citizens in the Interior; and that they were "un-American and an unjust burden upon the pioneer people of Interior

Alaska." Some ninety-two petitioners asked President Roosevelt and Secretary Ickes to revoke the order "forthwith" and grant Interior residents "their accustomed right to the free use of the Richardson Highway...."19

New System Seems To Work

But despite these protests, the new system seemed to work, at least for a while. The truckers could not evade the toll station, for they had to cross the river. Highway tonnage destined for Fairbanks slipped from 734 tons in 1934 to 304 tons in 1935. Regular ferry collections for the crossing at one dollar per vehicle decreased from \$1,186.00 in 1934 to \$967.00 in 1935. The new toll brought in a total of \$2,856.00 in 1935. But Ohlson's hopes were shortlived, because with financial aid from interested parties in Fairbanks and Valdez, the truckers soon regained the tonnage they had lost. By 1939, the trucking business boomed: and confident of public support, the truckers were prepared to evade the tolls by subterfuge if possible and force if necessary. In September 1939, Clyde Gordon, a motor truck operator, reached the McCarty ferry with a load of fuel oil. Toll collectors Lloyd Hansen and Charles Simmons denied Gordon the use of the ferry when he offered payment only of the vehicle toll of one dollar. They demanded that he pay the 2.5 cents per ton-mile from Valdez to Fairbanks. Gordon returned to his truck which he parked some 200 yards south of the ferry landing and within a short time U.S. Deputy Marshal Einar A. Tonseth arrested him at the request of Frank Nash, the superintendent of the Commission for the Fairbanks district. No complaint had been filed had nor a warrant for arrest been issued. The deputy marshal took Gordon to Fairbanks after forcing him to leave his truck south of the ferry. Once in the city, he was set free. Gordon thereupon filed a suit against the ARC asking that the judge issue an injunction preventing the collection of tolls on the highway, insisting that neither Ickes nor the Alaska Road Commission had the right to impose tolls which were "designed to annoy, harass, and penalize" those transporting

freight over the highway. What Gordon had failed to mention in his civil suit was that he had parked his truck in such a fashion that it blocked all other traffic. Only after he refused to move the truck did Tonseth arrest him. On July 26, 1940 Federal District Court Judge Harry E. Pratt rejected Gordon's suit, stating that the Secretary of the Interior had the authority to level tolls and that he did not "act beyond the power delegated and that he did not act capriciously and arbitrarily." A month later Gordon appeared in the U. S. Commissioner's Court on a charge of disorderly conduct, based on his having again blocked the Richardson Highway at the McCarty ferry crossing just a few days earlier. This was the second time the ARC accused him of obstructing access to the ferry. This time Benjamin D. Stewart, Jr., a civil engineer with the ARC signed the complaint on which the warrant of arrest was issued. Deputy U.S. Marshal Pat O'Connor made the arrest after Gordon parked his truck diagonally across the road in front of the toll booth. He refused to pay, and did not do so until after he was arrested. Then the ferry took him across the river and he drove into town. The jury listened to the testimony and shortly thereafter returned its verdict of "not guilty." The jury verdict proved that there was much support for the trucker's position. In fact, after the verdict officials of the ARC were "somewhat up in the air as what to do in case the truck drivers try another such stunt, as it will apparently do no good to have them arrested and appears very doubtful if a jury could ever be secured in Fairbanks that would return a verdict of guilty, no matter how strong the evidence."²²

Truckers Rebel

By the summer of 1940, truckers sometimes unloaded their trucks at the river and shipped their loads across on a motorized, homebuilt scow defiantly waving a skull-and-crossbones flag. They then drove their empty trucks onto the ferry, paid the required one-dollar fee and re-loaded after debarking on the north bank. The Fairbanks Daily News Miner reported that "Truckers Refusing Toll Pay; Richardson Highway

Battle Flares as Freighters Buy Boats." Six Fairbanks trucking companies were determined not to pay the government tolls, and had hauled a number of large motor boats to Big Delta to tow their scows. Alaska's acting Governor E. L. Bartlett reviewed the situation for the Department of the Interior, and suggested that an alternative toll station could be established at Shaw Creek, somewhat closer to Fairbanks than Big Delta. That would require the establishment of a separate organization there, however, and add to the costs. Bartlett warned Washington, however, that "the substantial and informed opinion at Fairbanks, is that no matter where a toll station is established or how it is established no jury could be found locally to convict a man for failing to pay the toll." Before the department responded to this latest incidence, six truckers, members of the Tanana River Transportation Company arrived at the ferry crossing northbound in the early evening hours of September 15. The group lingered on the south side and made no attempt to cross the river on the ARC ferry or on their own boats and small barge. Shortly before midnight the ferry operator, Floyd Hansen closed for the night and remarked that "anyone wanting to cross the river could go ahead, use the ferry and take themselves across...." The truckers took Hansen at his word and took their loaded vehicles across. They then gave Clyde (Doc) Gordon, the individual operating the gas boat and barge at Big Delta for the freighters five dollars to pay the ferry charge.²³

Toll Rebellion Continues

Superintendent Frank Nash quickly replaced ferryman Hansen with Otto Bayles and instructed him to take along padlocks and chains to secure the ferry, when it was not in operation. The truckers, however, continued to use the ferry without paying the tolls. In the early morning hours of September 20, Gordon and a few other men hooked onto the ARC ferry with the trucker's power boat, called the Paul Bunyan, and towed six trucks across the river and then returned the ferry to the south banks. The truckers continued to use the ferry whenever they arrived

at Big Delta, either loaded or empty. Bayless kept the steering wheel locked, but made no attempt to lock it to the shore as it seemed likely that sooner or later violence would erupt and somebody would get hurt. Early on the morning of September 25, the Paul Bunyan broke down, so the truckers broke the chain and operated the ferry under its own power. A day later the Department of Justice dispatched Deputy U.S. Marshal Pat O'Connor to Big Delta to restore order. Since they had succeeded before, O'Connor's presence did not intimidate the truckers who continued their assault on the toll system. Within a short time, the Deputy Marshal arrested fourteen truckers who refused to pay tolls. After each arrest, he allowed the individuals to take his loaded truck across the river without toll payment and permitted the driver to proceed to Fairbanks on his own recognizance. U.S. Marshal Joseph McDonald jailed the men for a few hours, and then Judge Pratt released them after the prisoners had applied for a writ of habeas corpus.²⁴

Trial Of The Truckers

The joint trial of the fourteen men accused of disorderly conduct for the alleged blocking of the Richardson Highway at the Big Delta ferry crossing lasted a day and a half before United States Commissioner William V. Growden. The jury of seven men and five women deliberated only one-half hour and returned a verdict of "not guilty." United States Attorney Ralph J. Rivers remarked in disgust that he had "just lost the first highway blockade case on an absolutely arbitrary acquittal by a local jury...." In fact, most Fairbanksans considered taking the ferry as a protest against the toll as a type of "Boston Tea Party patriotism." Under the circumstances, with no provisions for punishing toll evaders on the books except the disorderly conduct statute, Rivers saw little sense in prosecuting additional cases.²⁵

Rivers did not know it yet, but a day earlier, on October 14, a number of truckers seized Dennis Doyle, the Deputy U.S. Marshal stationed at Big Delta, took his shotgun and locked him into the Commission

scale house. They then moved ten loads of freight across the river on the ferry without payment of toll. After the truckers had finished their work, they released Doyle and gave him back his gun. There were no arrests. As soon as Rivers heard of the incident he declared that "assaulting an officer in the performance of his duty" constituted a felony with a maximum punishment of three years in jail or a \$5,000 fine or both. Rivers planned to present the case to the grand jury. The issuance of warrants for arrest and subsequent trial in the district court, he stated, would depend on the return of indictments by the grand jury. A couple of days later, Nash ordered the ferry drydocked for the season because of low water and running ice in the river. Nash was relieved that his troubles had ended, at least for the time being.²⁶

Governor Gruening Is Angry

While the traffic on the Richardson Highway ended with the onset of winter, the paper war over tolls continued. Alaska's Governor Ernest Gruening was angered by this "latest carefully planned act of violence" and thought it essential "that justice be meted out to the culprits if the Department's highway regulations are ever to be enforced." He suggested that the Department of Justice act "promptly and vigorously," and, if necessary, station a force of U.S. Deputy Marshals "sufficiently great to prevent a repetition of this latest performance."²⁷

Gruening soon learned that the grand jury in Fairbanks had refused to return an indictment against the truckers because they considered the Richardson Highway toll discriminatory and retarding the development of Alaska. The governor relayed the news to Secretary Ickes. He clearly was unhappy about the action of the grand jury, but apart from the toll evasion - which had cost an estimated \$7,633 in 1940 - there had also been the persistent overloading of trucks, adding further to highway maintenance costs. Obviously there was a toll rebellion on the Richardson Highway, and Gruening suggested that in the 1941 season the department should meet these challenges and, regardless of cost,

enforce the regulations. Gruening had strong opinions on the subject, but throughout the winter of 1940-41 his superiors endlessly debated the question of what to do about the toll rebellion in far off Alaska. Learned lawyers exchanged complicated opinions, and administrators simply scratched their heads. By April 1941, Secretary Ickes, although loath to admit it, had to confess that the federal government was powerless to secure compliance with the regulations "issued under law by the Secretary of the Interior and approved by the President."²⁸

U.S. Deputy Marshals At Ferry

By May 1941, Ickes informed the governor that the Department of Justice had authorized the stationing of two U.S. Deputy Marshals at the Big Delta ferry. If these law officers were unable to control the situation, Gruening was to close the highway to all through traffic. The governor thought that two deputies should be able to enforce the law, but warned that U.S. Marshal McDonald had connived with the truckers last year. He should be informed that unless he performed his duties he and his Deputy Marshals would be fired.²⁹

Gruening was convinced that the toll rebellion would continue. Already, the truckers were constructing a big scow at Big Delta to be used to haul their trucks across the river. The governor had looked into the possibility of having the government withdraw all the surrounding land from entry, thus making it impossible for a rival ferry to operate. Unfortunately, some homesteads already had been claimed and the competing ferry would operate from this privately held ground. Other alternatives for collecting tolls existed not far from Big Delta in places where the road was narrow with a cliff on one side and the river on the other. Abandoning maintenance on the highway was another possibility, for it soon would become impassable. As a last resort, "a discharge of buckshot into one of the truck's gas tanks and tires would have a decidedly deterrent effect upon the violators," Gruening thought.³⁰

Truckers Use Their Own Ferry

By June Marshal McDonald reported that all was quiet at Big Delta because the truckers used their own ferry to cross the river and then resumed their journey north to Fairbanks. The Marshal suggested that the Commission establish a toll gate at Shaw Creek bridge, twelve miles north of Big Delta. At this point the road made a sharp descent to the river level, crossing Shaw Creek over a bridge. He offered to station his deputies there, but the ARC was unclear about whether it had the authority to proceed in the matter.³¹

Compromise Reached

On July 18, 1940, Ickes adopted McDonald's suggestion and revised the regulations which now prohibited any vehicle transporting freight to pass Shaw Creek bridge without proof of payment of tolls. The ARC constructed a toll gate, which, however, truckers presumably pulled out and destroyed. Before deputies could be stationed at Shaw Creek and a new toll gate be built, the truckers and the government reached an agreement. Until a court decided upon the validity of the tolls, the operators agreed to pay the toll which was to be placed in escrow. George W. Folta, the Counsel-at-Large for the department, negotiated the agreement. The truckers insisted, and Folta agreed, that the validity of the tolls be tested in the Appellate and Supreme Court.³²

World War II Solves The Problem

On October 17, 1941, the district court in Fairbanks upheld the validity of the tolls. By the summer of 1942 there was no doubt that the tolls only added to the cost of supplies and equipment for federal wartime projects. Colonel Ohlson had his hands full in moving an unprecedented volume of military freight and keeping his railroad from collapsing under its weight. The small amount of truck cargo destined for Fairbanks civilians no longer mattered. On July 15, 1942 Ickes

removed the tolls, and they were never restored. The demands of war had disposed of the dispute.³³

FOOTNOTES

1. Wilson, Railroad in the Clouds, pp. 155-156.
2. Ibid., p. 207.
3. Ibid., pp. 210-211.
4. Governor George A. Parks to Secretary of the Interior, July 5, 1932, Central Classified Files, 9-1-55, part 1, Record Group 126, N.A.
5. Ibid.
6. E. K. Burlaw to Judge Finney, July 7, 1932, Ohlson to J. M. Dixon, July 9, 1932, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
7. Memorandum by Dobbel, executive assistant to the secretary, August 20, 1932. Parks to Secretary of the Interior, October 11, 1932, Ohlson to Secretary of the Interior Lyman Wilbur, October 28, 1932, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
8. Burlaw to Ohlson, December 1, 1932, Regulations Governing Traffic On The Richardson Highway, Territory of Alaska, February 15, 1933, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
9. Finney memorandum, March 7, 1933, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
10. Harold L. Ickes, Order No. 640, June 13, 1933 and Appendix, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
11. Mary Childers Mangusso, "Tony Dimond," The Alaska Journal, Autumn 1982, pp. 11-23; Dr. Marie Therese Dimond, Sister, Notre Dame de Namur, interview with Claus-M. Naske, April 20, 1975, Washington, D.C.
12. Dimond to Ickes, June 2, 1933, Ickes to Dimond, June 13, 1933, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A. The regulations follow in full:

REGULATIONS GOVERNING TRAFFIC ON ALL ALASKAN ROADS AND HIGHWAYS

In accordance with the act of June 30, 1932 (47 Stat. 446) the following regulations are promulgated for governing traffic on all Alaskan roads and highways constructed wholly or in part from Federal funds by the Alaska Road Commission.

1. No wheeled vehicle shall have a gross weight including load, exceeding 16,000 pounds, no single wheel load shall exceed 6,000 pounds and the maximum load per inch diameter of pneumatic tire shall not exceed 500 pounds and per inch width of steel tire not to exceed 300 pounds, except that any vehicle exceeding these limits which has prior to the issuance of these regulations, been in use on the roads covered by these regulations. Such vehicles may be operated only by special permit, which may be obtained upon application to the Commission, subject to revocation should damage occur to the roads as a result of the operation of such vehicle.

2. The moving load on any bridge shall not be greater than 20,000 pounds for any conveyance having a length of not less than 14 feet. Not to exceed two such successive loads shall be allowed on any span bridge at once. If conveyance is of crawler type the bearing per square inch of tread shall not exceed 10 pounds.

3. During the period of thawing in the spring and after periods of continuous rain, the load limits specified above may be reduced for limited time by order of the local superintendent to such an extent as may be necessary to protect the roads from damage.

4. No motor vehicle shall be operated at speed which may be considered unsafe or in a reckless or careless manner. Any motor vehicle operated at speed such that it can not be brought to a stop within the length of road visible to the operator at any time or any such vehicle not properly equipped with brakes will be considered careless and reckless operation. No truck, the gross load of which exceeds 6,000 pounds shall be operated at a speed exceeding 25 miles per hour.

5. Failure to comply with the regulations herein set forth will subject the owner of the motor vehicle to liability for any damage occasioned thereby, and in the discretion of the Alaska Road Commission, the offender may be denied the privilege of using the roads to which these regulations are made applicable.

REGULATIONS GOVERNING TRAFFIC ON THE RICHARDSON HIGHWAY TERRITORY OF ALASKA

In accordance with the act of June 30, 1932 (47 Stat. 446) there are hereby promulgated the following regulations governing traffic on the Richardson Highway.

1. Licenses: A permit or license shall be required of every motor vehicle operating over the Richardson Highway. Such license shall be issued by the Alaska Road Commission upon application, shall be good during the year of issue, expiring on December 31st

of each and every year and shall be renewed annually upon application to the Commission. The application for registration must state the class of vehicle and such other information as the Commission may require. It must contain an agreement that applicant will waive the Government's responsibility for maintaining the Richardson Highway passable at all times and that applicant will not carry passengers for hire unless registered under Class B nor transport freight commercially unless registered under Class C, described below. When such license is issued to the applicant he will be provided with a sticker to be placed on the windshield which will signify that the motor vehicle in question is so registered for the current year. The nominal fee of \$1.00 (one dollar) shall be collected for this registration.

2. Classes: All motor vehicles operating on the Richardson Highway should be divided into three main classes:

- A. All motor vehicles used for commercial or pleasure purposes not listed in Classes (B) or (C) below;
- B. All motor vehicles carrying passengers for hire;
- C. All motor vehicles transporting freight for hire.

In addition to the fee required for every motor vehicle operating over the said highway, a license fee shall be required for each motor vehicle listed under either Class B or Class C or Class C when operated under Class B, in an amount to be determined annually by the Alaska Road Commission with the approval of the Secretary of the Interior. A distinguishing windshield sticker shall be issued for vehicles in Classes B and C.

3. Operation of Motor Vehicles: No wheeled vehicle shall have a gross weight including load, exceeding 10,000 pounds, no single wheel load shall exceed 3,500 pounds, and the maximum load per inch diameter of pneumatic tire shall not exceed 500 pounds and per inch width of steel tire shall not exceed 300 pounds. The width of vehicle or load shall not exceed 7 1/2 feet and the length including trailer shall not exceed 20 feet. If it is necessary to move loads of greater width or length than above specified, a special permit may be granted for each such case.

The moving load on any bridge shall not be greater than 20,000 pounds for any conveyance having a length of not less than 14 feet. Not to exceed two such successive loads shall be allowed on any span bridge at once. If conveyance is of crawler type the bearing per square inch of tread shall not exceed 10 pounds.

No motor vehicle shall be operated at a speed which may be considered unsafe or in a reckless or careless manner. Any motor vehicle operated at a speed such that it can not be brought to a

stop within the length of road visible to the operator at any time or any such vehicle not properly equipped with brakes will be considered careless and reckless operation. No truck, the gross load of which exceeds 6,000 pounds shall be operated at a speed exceeding 25 miles per hour.

4. Penalties: All permits or licenses issued by the Alaska Road Commission under these regulations shall be subject to revocation for failure to comply with any regulation herein set forth, and any

person, firm or corporation who shall operate a motor vehicle over said highway, without having secured a permit or license as herein provided, or who shall operate such vehicle after such permit or license shall have been revoked for violation of any of these regulations, shall be subject to the same penalties as the laws of the Territory may provide for a like offense in said territory.

13. Ickes to Troy, July 20, 1933, Central Classified Files 9-1-55, part 2, R.G. 126, N.A.
14. Troy to Ickes, July 30, 1933, James D. Cunningham memorandum for Burlew, January 25, 1934, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.
15. Warren to Ickes, October 5, 1933, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.
16. Troy to Burlew, January 20, 1934, Ickes to Troy, June 7, 1934, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.
17. Thomas to Burlew, July 31, 1934, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.
18. Department of the Interior, Order No. 905, March 25, 1935, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
19. Valdez Chamber of Commerce to Ickes, February 9, 1935, Fairbanks citizens to Roosevelt and Ickes, May 14, 1935, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
20. Traffic on Richardson Highway at McCarty Ferry, December 6, 1935, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
21. In the District Court for the Territory of Alaska, Fourth Division, Clyde Gordon, Plaintiff, vs. Frank Nash, Lloyd Hansen, and Charles Simmons, Defendants, September 18, 1939, Nash to Juneau Headquarters, Alaska Road Commission, September 20, 1939, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.

22. Opinion, Clyde Gordon vs. Frank Nash et al., July 26, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A. Fairbanks Daily News-Miner, August 14, 1940; Nash to Juneau Headquarters of the Alaska Road Commission, August 16, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
23. Wilson, Railroad in the Clouds, p.212; Fairbanks Daily News-Miner, September 17, 1940; Nash to Juneau Headquarters, Alaska Road Commission, September 20, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
24. Fairbanks Daily News-Miner, September 26, 30, 1940; Nash to Juneau Headquarters, Alaska Road Commission, October 1, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
25. Fairbanks Daily News-Miner, October 3, 1940; Rivers to Nash, October 15, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
26. Fairbanks Daily News-Miner, October 15, 16, 1940.
27. Gruening to Ickes, October 25, 1940, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A. A summary of traffic at Big Delta for 1939 and 1940 and an estimate of toll evaded in 1940 follows:

	<u>1939</u>	<u>1940</u>
Govt. vehicles	342	417
All other vehicles	<u>1800</u>	<u>2142*</u>
Total	2142	2559
Govt. passengers	761	691
Other " Local traffic	2090	2197
Other " Commercial	<u>2920</u>	<u>3578</u>
Total	5771	6466
Freight Excl. Govt. Local Tons	31.95	9.00
" " " Through "	<u>1408.15</u>	<u>2167.50*</u>
Total	1440.10	2176.50
Ferry charges collected	\$1800.00	2093.50**
Tolls collected	13252.34	12439.17**

*These include vehicles and tonnage on which no ferry charge was made as shown below.

**Does not include established amount of toll and ferry charges evades as shown below.

Estimated amount freight moved across river by other means than ARC ferry	481 tons
Estimated amount freight moved across river on ARC ferry by freighters who took over ferry and did not pay toll	270 tons
Estimated amount freight moved across river on ARC ferry by ferryman upon order of Deputy Marshal after he had arrested drivers for blocking road. No toll paid	<u>72 tons</u>
Total estimated freight on which toll not paid	823 tons
Vehicles crossed on ferry while being used by truckers - no ferry charge paid	49
Estimated toll evaded 823 tons 305,333 ton miles @ .025 (Assumed all above freight moved Valdez to Fairbanks, 371 miles)	\$7633.32
Ferry charges evaded	<u>49.00</u>
Total estimated evasion	\$7682.32

The increase in number of vehicles crossing the ferry is partly accounted for by the fact that the road was open between Valdez and Fairbanks about two weeks earlier in 1940 than in 1939 thus increasing the length of open season about 10%. This also partly accounts for increase in freight hauled.

28. Alaska Daily Press, October 29, 1940; Gruening to Ickes, October 30, 1940, Ickes to Attorney General, April 10, 1941, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
29. Gruening to Ickes, May 29, 1941, Central Classified Files 9-1-55, part 2, R.G. 126, N.A.
30. Ibid.
31. McDonald to Attorney General, June 16, 1941, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.

32. United States of America, Plaintiff, vs. Lawrence J. Rogge et al., August 15, 1941, Office File of G. W. Folta, Counsel-at-Large, Juneau, Alaska, R.G. 48, N.A. Folta to Margold, August 19, 1941, Central Classified Files, 9-1-55, part 1, R.G. 126, N.A.
33. United States of America, Plaintiff, vs. Lawrence J. Rogge, et al., October 17 1941, Order No. 1715, July 15, 1942, Central Classified Files, 9-1-55, part 2, R.G. 126, N.A.

CHAPTER THIRTEEN

THE DIFFICULT YEARS OF THE EARLY 1930s

Alaska had changed substantially between 1905, when the War Department assumed the responsibilities for building and maintaining wagon roads, bridges, trails, and sled roads, among others, when the Department of the Interior took over these duties on July 1, 1932. The War Department turned over an 11,231 mile long transportation system, of which, however, only 1,627.5 miles consisted of roads. Still, it was a substantial achievement, considering the fact that in 1905 there had been less than a dozen miles of wagon roads in all of Alaska.

Transportation Systems

With the increase in road and railroad mileage, and the expanding air transportation system, steamboat travel on the Yukon River had continued to dwindle until in 1930 there was only one boat every two weeks plying between Nenana and Holy Cross, owned by the Alaska Railroad. A gasoline launch, operated by a commercial company, irregularly served points between the mouth of the river and Holy Cross. One steamboat came down from Dawson once every two weeks and traveled up the Tanana River to Nenana. Gas or steamboats supplied small communities located on the tributaries of the Yukon and Tanana Rivers usually only twice a year, in the spring and again in the fall. The price of these services was exorbitant.¹

The Alaska Railroad

The Department of the Interior managed the Alaska Railroad which ran two trains weekly in the summer and one in the winter. The Copper River and Northwestern Railway had closed during the winter because the owners had shut down the Kennecott mine because of low copper prices. This had deprived the railroad of its chief income source, transporting the metal between Kennecott and Cordova. On the Seward Peninsula, the

Alaska Road Commission maintained the seventy-four mile long narrow gauge railroad from Nome to Shelton which the territory of Alaska previously had purchased from its owners. It was a railroad without headquarters, shops, roadhouses, stations, telegraph operators, or schedules. Those who traveled it owned their transportation, using the track whenever convenient. It was known as the "pupmobile" of the North, because dogs customarily pulled the light push cars which could be lifted from the rails when meeting someone from the opposite direction. Hawley Sterling, a long-time employee of the Alaska Road Commission, remarked that "any arguments upon meeting were usually between the 'locomotives' rather than the 'engineers'"²

Air Transportation

Just as horses had partially replaced dogs, now the airplane consigned both to obscurity for long distance travel. Airplane companies operated in Anchorage, Fairbanks, and Nome. Licensed bush pilots flew for hire, and fares between Fairbanks and Nome and Anchorage or Fairbanks and McGrath had been reduced to \$200.00 and \$100.00, respectively. The territorial legislature had financed the construction of scores of airfields, and "Outside" capital had become interested in commercial possibilities of Alaskan aviation, particularly a future route through Canada and Alaska to the Orient. In mid-summer 1934, Lieutenant Colonel Henry "Hap" Arnold led a flight of ten Martin B-10 twin-engined bombers to Alaska. Chief of the Army Air Corps, General Ben Foulois, had given Arnold the special assignment to follow the early air trails pioneered in 1920 when General Billy Mitchell had sent Captain St. Clair Streett in command of four biplanes from New York to Nome. This famous flight of the Black Wolf Squadron had demonstrated the feasibility of air transportation from the contiguous states to Alaska. Arnold's 1934 mission was far more sophisticated for his intention was to take aerial photographs for navigation charts and future airway routes, and to evaluate the feasibility of locating future defense bases in Alaska.³

Shrinking Funds

Congressional appropriations for the Alaska Road Commission shrank from a peak of \$1,013,577.53 in 1926 to \$448,777.90 in 1933, despite the fact that more road miles had to be maintained. Yet much had been accomplished despite the financial shortages. The Richardson Highway was gravel; surfaced for its entire length, and automobiles could travel comfortably from Valdez to Fairbanks in two days without danger of becoming stuck in mud in a poor section. Passengers could travel the distance for as little as fifty dollars.⁴

Upgrading Roads and Machinery

The Alaska Road Commission had completed the Steese Highway from Fairbanks to Circle City on the Yukon River, and graveled the surface over the worst sections, encouraging placer mining along its route. From the Alaska Railroad, passengers could drive sixty-five miles into Mount McKinley National Park, and the Commission had built or was in the process of constructing other branch roads from the railroad. Good, short roads adjacent to coastal towns in the National Forests already existed or were being built, and vast improvements in road machinery had contributed to the progress. Tractors had proven their versatility in northern operations, and not only had replaced horses in road construction, but displaced these animals for winter freighting as well. Scrapers, graders, maintainers, and trucks had steadily improved in performance and eliminated much of the heavy manual labor. Hawley Sterling remembered that the father of the Alaska road system, General Wilds P. Richardson, or the "much beloved Colonel Dick to his friends," had last visited Alaska in 1925. He had died four years later. To his memory, a plaque in granite stood in Isabelle Pass along the road named in his honor. "No conscientious road man ever passes this monument," Sterling recounted, "without stopping for a brief ceremony of good cheer in Colonel Dick style."⁵

Operations in 1933

In its 1933 annual report, the Commission stated that "the general scheme of operations is practically the same as under the War Department," except that the military officers had all departed. As before, the Juneau headquarters, staffed by a chief and assistant chief engineers and the required clerical assistants, was located in the Federal and Territorial Building. The disbursing officer for the Department of the Interior at Juneau handled Commission finances. The Commission used Alaskan products in its work whenever price and quality compared favorably with the cost of the same items delivered to warehouses in the Territory. A governmental agency in Seattle, acting also for various other federal bureaus operating in Alaska, bought all supplies not obtainable locally. The individual bureaus shared the cost of this service on a pro rata basis. The Commission's share consisted of four percent of the invoice price of items purchased.⁶

Alaska Road Commission Employees

The Alaska Road Commission hired both common and skilled labor in the Territory. Decreased appropriations because of the Depression had resulted in shorter work periods for even the most senior employees, and others the Commission had not been able to hire at all that season. The Commission noted "the exceptional loyalty to the organization which is manifested generally even by the lowest paid laborers." The Commission explained that this was probably because "as a whole Alaska labor is probably superior to that found elsewhere." What the Commission did not mention was that seasonal employment suited the Alaskan lifestyles of its employees, many of whom utilized the off-season for hunting and trapping, or traveled outside to spend the winters in warmer climates.⁷

Districts and Subdistricts

The Alaska Road Commission in 1933 maintained five districts and two

district suboffices, located at Valdez, Anchorage, Nome, Chitina, and Fairbanks, and Eagle and Takotna. The Commission closed the two district suboffices during the winter months. In fact, during the winter of 1932-33, the Commission had decided to discontinue the Kuskokwim district suboffice located at Takotna. Increased air travel, which caused a marked decrease in the use of winter trails, made this move necessary. It saved \$2,500, and the Anchorage district office now handled the summer season operations. The Juneau headquarters office now supervised projects in the vicinity of Bethel which formerly had belonged to the Kuskokwim suboffice at Takotna.⁸

Multiple Responsibilities

As before, the Commission handled or supervised construction projects for other federal bureaus and the territorial government. This work consolidation had saved considerable tax dollars over the years, particularly on small projects in isolated sections of Alaska. This was especially true of small territorial road projects which were not included in the Commission's general road program.⁹

Difficult Construction Problems

Alaskan construction posed special problems because of the Territory's peculiar physical and climatic conditions. Permafrost and thawing during the summers required that special precautions be taken for proper drainage. It was frequently necessary to build intercepting ditches on the uphill side of a road to drain off the water. After vegetation had been stripped from the projected roadway, it was necessary to allow the ground to thaw, settle, and consolidate for several months before the grading could be completed and the surface finished. Often, it required several weeks to permit thawing, settling and drainage to occur. In order to keep the road open for traffic during this period it was necessary to corduroy the stretch in question. Once exposed, the subsurface ice continued to thaw, often

causing banks to slough which resulted in mud slides covering and blocking roads.¹⁰

Alaska's climate called for special revetment and stream control methods to withstand the destructive effects of sudden floods and wash-outs caused by the rapid runoff from melting snow, heavy rains in the mountains, or the release of impounded waters by breaks in glaciers. The Commission had found that the most suitable type of revetment for this purpose consisted of brush bundles wrapped in wire and weighted down with stones to prevent its washing away. Raging streams and rivers needed to be controlled at times, but most often they had to be crossed. The Commission built bridges of native fir or imported timber or steel, depending on their importance, and was in the processing of replacing culverts made of native lumber with metal culverts which did not rot.¹¹

Accomplishments

The small appropriation forced the Alaska Road Commission to confine its work largely to maintenance and improvement of the chief existing routes. The Commission accomplished the following work during the fiscal year 1933:

New construction of 21.5 miles of road, 59.5 miles of sled road, replacement of 340 linear feet of bridges of 60-foot span or over, and 1,732 linear feet of trestle span. It reconstructed 30.6 miles of road; surfaced 54.14 miles of road with 72,387 cubic yards of gravel; and built 319 linear feet of retaining walls, and replaced numerous culverts. The Commission maintained 1,552 miles of road, 74 miles of tramway, 707 miles of sled road, 4,687 miles of permanent trail and 329 miles of temporary flagged trail.¹²

John E. Ballaine and The Anchorage - Matanuska Road

It had been a poor year for the Alaska Road Commission, but prospects

for the future looked brighter as President Franklin D. Roosevelt's various New Deal agencies became operational. There were hopes that the Public Works Administration, provided for in the National Industrial Recovery Act, might allocate substantial monies for Alaskan road work in 1934. In the fall of 1933, Anchorage residents, as they had done for a number of years, once again pleaded that the Commission construct the Anchorage-Matanuska Road. On a previous occasion the Commission had turned the project down because it paralleled the Alaska Railroad and the money could better be used elsewhere. The proposed road also had its critics, and one of these was John E. Ballaine, a northern railroad promoter, businessman, and former general manager of the defunct Alaska Central Railroad. Ballaine objected to the project because the road would parallel the Alaska Railroad all the way to Matanuska and compete with it for freight, and, unlike claimed, not open "as much as an acre of agricultural land anywhere north of Eagle River. Furthermore, the argument that the road would provide miners with access to Anchorage simply was not true. There was "not a single miner, not a single mine, not a single prospect or indication [of any minerals] anywhere between Anchorage and Matanuska, 35 miles in the valley or in the adjacent mountains...." it was unnecessary to build the road because the Alaska Railroad already connected Anchorage with the road system in the Matanuska - Wasilla region. Furthermore, farmers already within three miles of Anchorage, and with vacant agricultural lands in a radius of eight miles of the city would be able to supply a settlement of one-hundred times its present population with agricultural products. Finally, Ballaine addressed the fact that Anchorage citizens for nine years had urged the construction of the proposed road and in 1933 alone had expended about \$4,000 by voluntary subscriptions, the Alaska Railroad had given its blessings once, and the Territorial Legislature had approved the proposal twice. That still was no reason to waste precious monies on the project, because "the identical reasons can be presented in favor of auto road building in thirty or more other localities in Alaska, not one of which has roads connecting either with the railroad or with navigable waters." Ballaine suggested that if funds were available they should be spent in providing access to

"an extensive shelf [of land] between Cook Inlet and the Kenai Mountains, an area 30 miles wide by 110 miles long, having rich soil over most of it...." This area, he claimed, was the potentially richest part of Alaska with birch and poplar forests, and thousands of acres of "luxuriant blue stem and red top grasses." The region about 2.2 million acres was washed by the "Japan current and yet being sheltered from the ocean by a projecting spur of mountains." With a benign climate, Ballaine suggested that it could comfortably support about 500,000 "hardy Americans" pursuing general agriculture, fruit growing, gardening, dairying, fishing, mining, and lumbering.¹³

Ballaine still had another proposal up his sleeve. He proposed that the Commission build a road between the end of the Chickaloon branch of the Alaska Railroad and the Richardson Highway at Gulkana, traversing a mineralized zone for forty miles out of Chickaloon. This would open rich country and allow the Commission to abandon some 250 miles of the Richardson Highway which wound "through barren country where no population or industries ever will be...." Such a scheme he claimed, "would abolish for all time the present destructive competition by the Richardson Highway against the railroad, and would benefit Anchorage and all the rest of the railroad belt incomparably more" than the proposed auto road to Matanuska.¹⁴

Governor Troy Refutes Ballaine

Alaska's Governor John W. Troy refuted Ballaine's criticisms, pointing out that the proposed road paralleled the railroad for only twenty-three miles out of Anchorage and then swung away and went through much good farmland between the Knik River and Palmer. Near Palmer, it connected with the 118 miles long Wasilla - Matanuska - Palmer road system, half of which was surfaced with gravel. The whole system was passable by automobiles during the summer. Unfortunately, the railroad operated only one weekly freight schedule throughout the year. This permitted only weekly delivery of farm products to the Anchorage market. Troy thought that the construction of the road would stimulate the approximately fifty homesteaders in the area to produce larger crops for

the city market. It was true, of course, that there were numerous projects throughout Alaska which had been endorsed by the citizens in their vicinities, but the argument in favor of the Anchorage - Matanuska project was that it served one of the larger population centers in the Territory.¹⁵

With the receipt of Public Works Administration monies, the Commission took over the Anchorage - Eklutna Road which Anchorage had started and partially graded. In the late fall and winter of 1933, the Commission graded 12 miles of this road, constructed bridges over Eagle River and Peters Creek, and put in a 300 foot steel bridge with a 120 foot approach over the Matanuska River at Palmer.¹⁶

Plans for a Juneau Douglas Bridge

The availability of Public Works Administration funds prompted Governor Troy to apply to the Corps of Engineers for permission to build a highway bridge across Gastineau Channel, connecting the cities of Juneau and Douglas on Douglas Island. Lieutenant Jon R. Noyes of the Corps held a public hearing on the application on November 8, 1933, where he explained that the Corps had to consider applications of that kind under the provisions of the Rivers and Harbor Act of 1899. The Governor asked for permission to build a bridge, composed of a fixed high level span 400 feet long across the channel at its narrowest point, and pile approaches on both sides for a total length of about 1300 feet, and rock fills on both ends connecting with the existing street system in Juneau and with the road extending northward from Douglas. The bridge was to be about 380 feet wide with a clearance of 50 feet above mean sea level which was about 38 feet above the highest recorded tide. Previously the War Department had issued permits for overhead cables across the channel to the electric company of Juneau and the Alaska - Juneau Gold Mining Company. Both permits, which had been in effect for about twenty years, crossed the navigable part of the waterway at an elevation of fifty feet or slightly greater. The clearances required of those two cables was above mean high water which was somewhat higher than that

requested for the bridge.¹⁷

Nobody at the hearing objected outright to the proposed bridge. Tom Gardner, for example, represented a lumber company which used the basin above the bridge site for storing log booms. His company had never experienced any difficulties in going to that part of Gastineau Channel above the bridge site at any stage of the tide passing under the existing wires and transmission lines. B. Frank Heintzleman, a forester employed by the Department of Agriculture, cautiously suggested that "it would be a big mistake to close the channel above the bridge to any future industrial development." Perhaps some investors "might want to start something up there which would require more clearance for vessels than these bridges you contemplate." Heintzleman proposed the construction of a draw bridge which would eliminate the problem. Then it would be possible to lower the bridge down to eight feet above the highest high water.¹⁸

None of the twenty-two witnesses who testified objected to the original bridge plans, and there was no real support for Heintzleman's draw bridge idea. It was not long before the Corps of Engineers issued the permit for the construction of the Juneau-Douglas Bridge, the Commission signed the necessary contracts, and the foundation work on the project began on April 23, 1934.¹⁹

The Governor's Construction Proposals

In late November 1933, Governor Troy had assembled a long wish list of roads, airfields, and other related projects to be built with funds to be appropriated by the Public Works Administration. It was an expensive request, consisting of twenty-five projects with a combined price tag of \$6,552,000. Unfortunately, however, Public Works Administration funding fell far short of requirements, only partially funding fourteen projects to the tune of approximately \$964,000.²⁰

Early in 1935 the Bureau of Public Roads in the Department of Agriculture evaluated the governor's proposed projects. As previously mentioned, the BPR had taken over construction of roads and trails in

Alaska's National Forests in 1922, a task performed by the Alaska Road Commission up to that time. The two organizations had developed quite different and distinct philosophies governing their construction activities in Alaska. The BPR noted, rather disdainfully, that Commission projects largely consisted of "surface construction more or less in the nature of expediency," in short, of very low standards. This resulted in subsequent heavy repair and maintenance expenses. "Such roads," a Bureau of Public Roads spokesman pointed out, could "be handled quickly by day labor or force account methods" and naturally did not involve "extensive long range careful planning."²¹

The work done by the Bureau of Public Roads contrasted sharply with that performed by the Commission. The BPR had constructed about 304 miles of roads in the Chugach and Tongass National Forests at a cost of \$6,278,273. Many of the Forest highways were situated near population centers, particularly Juneau, Ketchikan, Seward, and Skagway, and smaller settlements such as Wrangell, Petersburg, Sitka, Katalla, and Cordova. Nearly all of these roads were usable throughout the year. The work of the Bureau of Public Roads had been performed with careful surveys, with plans, designs, and construction intended for continued service over a long time period. After many years of Alaskan experience, the BPR was convinced that "such relatively permanent construction on rather narrow surfaced widths but with good grade, alignment and structures has been good policy." Naturally, work had been slow but steady, and in some instances portions of the highways needed to be improved to higher standards of widths and surface thickness. The BPR spokesman asserted that short season roads, such as mining service roads, "ought similarly to be always in usable condition."²² A noble ideal, but unattainable for the Alaska Road Commission which had to build and maintain roads, bridges, trails, tramways and airfields in all areas of Alaska outside of the Chugach and Tongass National Forests which covered approximately twenty million acres. Alaska contains about 365 million acres. Deducting the 20 million acres of National Forests left the Board with responsibilities over an area of 345 million acres. From 1905 to 1935, the Board had spent a total of \$22,107,953 from all sources and built 1,653 miles

of roads, 74 miles of tramway, 549 miles of sled road, 4005.5 miles of permanent trail, and 304 miles of temporary flagged trail. In 1935, the Board had added 121 miles of road, 8 miles of sled road, 6 miles of tram-road, 126 miles of trail, 848 linear feet of timber bridges over 38 foot span, 1,120 linear feet of steel bridges of 300 foot span or over 1,836 linear feet of timber trestle span bridges, 432 linear feet of concrete girder span, and 2 airfields.²³ Alaska Road Commission Construction standards might not have been as high as those of the BPR, but at least the Commission had succeeded in providing Alaska with a rudimentary transportation system of approximately 7,000 miles. That had been an extraordinary achievement, considering the Territory's difficult geography and climate and the Commission's meager financial resources.

In the summer of 1936, Delegate Dimond appealed to the House of Representatives to approve a ten-year road construction program for Alaska at a total cost of \$20 million, or \$2 million per year. Such a program, consistently carried out, would give Alaska "a really efficient and useful system of roads and one that would be bound to stimulate speedily the settlement and the economic development of the Territory." Unfortunately, Alaska in 1936 possessed only approximately 2,400 miles of motor roads, 1,500 miles of sledroads, and 7,000 miles of trails. Dimond explained to his colleagues that Alaskan trails were "pack paths through the forests and over the tundra, and not capable of being traversed by vehicles of any description." Only 2,400 miles of motor roads in a region of 586,000 square miles was not much, he complained. Indeed, "the State of Delaware, with a proportionate road mileage, would have just about 10 miles of highway in the entire State." Dimond observed that "even Delaware would feel rather cramped with only that much in the way of roads."²⁴

Dimond told his fellow lawmakers that the \$20 million requested for the ten-year period included not only construction but also maintenance costs from year to year. It did not include the substantial Territorial contributions for Alaskan roads. In fact, except for roads built in the National Forests and in Mount McKinley National Park, Alaska's citizens had paid approximately 32.3 percent of the entire cost

of construction and maintenance of all Alaska roads through 1935.²⁵

Dimond continued that even at the end of the ten-year period when the \$20 million had been expended, the Territory still would not have all the roads it needed. Dimond predicted that such a construction program would stimulate the "economic exploitation" of Alaska. There was no need to look beyond the ten-year period at present to determine what might be required for the future. "Eventually," he stated, "I hope to see a highway over which one can drive from New York City to Bering Sea without a break." All that lay in the future, however, and "for the present we must be more modest," and plan as presented "for immediate road development in Alaska has nothing in it of the unreasonable or extravagant."²⁶

Dimond concluded by listing 24 small local roads which cost an estimated \$343,000 to build. All 24 were badly needed, and all only served local requirements. The list follows:²⁷

Name of project:	Amount
Valdez-Mineral Creek.....	\$20,000
Kanctak-Becharof Lake.....	10,000
Campbell Creek Road.....	4,000
Lake Otis Road.....	3,000
Faith Creek Road.....	6,000
Porcupine Creek Road.....	12,000
Cleary-Summit-Chatham Creek.....	6,000
Happy-Goldstream Road.....	15,000
Farmers-Birch Hill Road.....	14,000
Bettles-Coldfoot.....	20,000
Bessie-Snake River Road.....	20,000
Marvel Creek Trail.....	5,000
Vault Creek Road (3 miles).....	3,000
Mason Creek Road (5 miles).....	5,000
Grant Creek Road (4 miles).....	4,000
Nenana-Mission Road.....	4,000
Cripple-Cripple Mountain.....	20,000

Homer Road Extension.....	38,000
Marshall Road.....	6,000
Candle Creek Road Extension.....	12,000
Marsh Branch, Anchorage.....	6,000
Pt. Gustavus Road.....	15,000
Teller-Bluestone.....	20,000
Seldovia-McDonald Spit.....	75,000
	<hr/>
Total.....	\$343,000

Dimond followed the list of small projects with a more substantial one which, in his estimation, needed to be constructed without delay. He gave the location of the road and an estimate of the funds needed to complete each project. The list follows:²⁸

Olnes-Livengood

Estimated to complete..... \$215,000

This road is necessary, indeed absolutely necessary, for the development of the extremely promising Livengood mining region. The work was commenced with Public Works funds; \$295,000 of such funds having been spent thereon. It is estimated that \$215,000 is necessary to complete the work. This project is surely entitled to a high degree of priority and should be undertaken without delay. The road can be completed economically in 18 months from the date the work begins.

Shelton-Dahl

Estimated to complete..... \$35,000

This project was estimated to cost in the beginning \$170,000, and an allotment from Public Works funds of \$135,000 was obtained and spent. The project provides for the construction of 6 miles of tram as an extension of the Nome-Shelton tram, a ferry over the Kuzitrin River, and the construction of 10 miles of tractor road east of the river. Completion of this road will provide easier access to a known productive placer field, reducing the present freight rate thus enabling operators to work lower-grade gravels and thus, in turn, provide employment for a very considerable number of persons in an industry where competition does not exist.

Kantishna-Park Boundary

Estimated to complete..... \$50,000

This project calls for the construction of 6 miles of road, and when completed it will connect with the road which traverses Mount McKinley National Park. The completion of this road will unquestionably stimulate the Kantishna mining district, which is one of great promise. The Kantishna district is the only district in Alaska which holds excellent prospects of being developed for its silver ore. The road would be an important feeder to the Alaska Railroad, a point worthy of consideration. The road can be completed within 5 months after construction begins.

Talkeetna-Cache Creek

Estimated to complete..... \$150,000

The district supplied by this road affords employment in the placer fields for 100 men during the summer months. The present poor road has been in existence for 14 years as a passable wagon road. It is planned to improve it to a truck-road standard and to extend it to existing placer operations, enabling operators to materially reduce freight costs, thus again permitting the working of lower-grade gravels and an increase in employment and additional tonnage for the Alaska Railroad. The plans call for construction of the road in a period of 15 months after commencement of work thereon.

Cantwell-Valdez Creek

Estimated to complete..... \$345,000

This road will connect the very important mining district of Valdez Creek with the Alaska Railroad. The building of the road is certain to furnish additional traffic to the Alaska Railroad, and thus make the railroad what it was designed to be, a large factor in the development of the country through which it passes. Some money, approximately \$25,000, from Public Works funds has been expended on the project for bridge construction. The road is of distinct merit. An estimate has been made that 30 months will be required for construction, embracing three summer working seasons.

Hot Springs Road System

Estimated to complete..... \$80,000

An allotment of \$10,000 from P. W. A. funds has been expended

on this project for preliminary construction of a tractor road. Recent developments in placer mining in the area indicate the necessity for a truck road, and the estimate has been increased accordingly. The road will serve a producing placer camp which has been handicapped due to lack of adequate transportation. If the work is started on June 1, it may be completed within 16 months.

Willow Creek System

Estimate to complete..... \$80,000

The Willow Creek system supplies an outstanding mineral region of Alaska with the necessary roads, but the system is far from being complete. The additional amount estimated, \$80,000, allows for the improvement and graveling of the Willow Creek-Lucky Shot Road and for the construction of the proposed 2-mile Willow Creek Spur Road, which will serve new lode properties now having no road. This road system also is a feeder to the Alaska Railroad. Work can be completed in one working season.

Takotna-Nixon Fork

Estimate to complete..... \$150,000

The town of Takotna is situated 65 miles up the Takotna River from the Kuskokwim River. It supplies the entire mining community in the vicinity of Takotna and Ophir and is the terminus of a road leading to Ophir and the Yukon watershed. The Takotna River on its upper reaches is a very unreliable means of transportation due to swift water and bars. In dry seasons it is impossible to get freight by river to Takotna, and in several instances spring freight has had to lay at McGrath until November and then has been hauled on the snow. The first 20 miles of the Takotna River--from McGrath to the mouth of the Nixon Fork--is always navigable. It is proposed to build a road 15 miles long from Takotna to this point, doing away with 45 miles of very uncertain river travel and making this community accessible at all times in summer. The work can be completed within two working seasons of 5 months each.

Poorman-Ruby

Estimated to complete..... \$200,000

The construction of a passable wagon road 56 miles between these two points was recently completed, reducing the freight rate from 12 to 6 cents a pound. It is proposed to improve and gravel

this road, which will further reduce the freight rate to not more than 2 cents a pound. This will allow lower grade ground to be worked and stimulate gold production in this vicinity, leading again to material increase in employment in working the low-grade placer grounds which will be made available for operation by the road. Work can be completed in two working seasons of 5 months each.

McCarthy Road System

Estimated to complete..... \$84,000

This road system is connected with the Copper River & Northwestern Railroad near its terminus at the Kennecott mine--the point of departure of the railroad being at the town of McCarthy. These roads serve operating placer mines which have been worked for years, and lead to numerous promising gold-lode prospects. A large part of the expenditure in this region has been made in building and maintaining a bridge across the Nizina River. This bridge is absolutely necessary. In former years it was crossed by fording or swimming, and many lives were lost. No large-scale operations can be carried on under such circumstances. The work may be completed in two working seasons. This system embraces much-needed construction to supply road facilities for the important Bremner mining district.

Iliamna Bay-Iliamna Lake

Estimated to complete..... \$30,000

This is a part of a transport route to connect Bristol Bay with the Gulf of Alaska through Cook Inlet. The use of this route saves approximately 2,000 miles of travel by sea around the end of the Alaska Peninsula. The construction of this road, coupled as it is with travel by boat on Iliamna Lake and on the Kvichak River into Bristol Bay, gives facilities for a great saving in transportation costs. The route is already extensively used. The work may be completed in one working season.

Newhalon-Lake Clark

Estimated to complete..... \$40,000

This project will require the construction of 7 miles of road providing a portage from Lake Iliamna to Lake Clark. There is a large native settlement on Lake Clark; at the present all supplies for the Lake Clark area are packed across this portage on men's

backs. Work can be completed within 6 months.

Gulkana-Nabesna

Estimated to complete..... \$245,000

Estimated cost \$450,000; allotted from Public Works funds, \$205,000; balance unallotted, \$245,000. The balance required will complete this road to one of the most promising hardrock sections in Alaska. One mine is now milling \$1,000 per day. According to the Geological Survey, there are many possibilities of additional deposits being found. With the completion of the road, the district will see an influx of prospectors who will undoubtedly prove the prediction of the geologists. Work can be completed within 18 months from commencement, provided it is started at the beginning of a working season.

Goodnews Bay-Platinum Creek

Estimated to complete..... \$35,000

This project provides for the construction of 9 miles of road connecting placer platinum mines with ocean boats at Goodnews Bay. One of the larger mining companies has tentatively agreed to provide the balance of the funds required above this estimate for completion. Work can be completed within 6 months.

Chistoचना-Slate Creek

Estimated to complete..... \$40,000

This provides for the improvement of an existing trail, 40 miles in length, to provide for freighting by tractors to serve a producing placer-mining area. Work can be completed within 6 months.

Colorado Station-Wells Mine

Estimated to complete..... \$75,000

This project provides for the construction of 10 miles of road from the Alaska Railroad to a lode mine now being developed on a very considerable scale. The road is an absolute necessity for the mineral development. The working of the lode property in question, now apparently amply financed, will give employment ultimately to several hundred men and will not throw anybody out

of employment. The road is eminently justified from an economic standpoint. It has been estimated that by commencing work on the project at the beginning of the season the work can be completed within 18 months.

Kenai Lake-Kenai-Homer

Estimated to complete..... \$1,100,000

This is one of the most important road projects in all of Alaska. A road has heretofore been built from Seward to the east end of Kenai Lake and from Moose Pass, which is approximately 12 miles from the east end of Kenai Lake to Sunrise and Hope on Turnagain Arm. A branch of this road has been constructed--the construction is not completed--to the west end of Kenai Lake. From the west end of Kenai Lake the plan is to build the road to the town of Kenai on Cook Inlet and thence south to a small settlement called Homer, on Kachamak Bay. This would open up and make available for settlement some of the best agricultural land in Alaska. It should be noted here that the so-called "missing link" between the east end of Kenai Lake and Moose Pass is now under construction. With the completion of the "missing link" and the building of the Kenai Lake-Kenai-Homer Road all of that very large region will be rendered accessible to settlers, and, more important, the settlers will have access to the market which will be afforded through Seward and through other towns along the Alaska Railroad. It is to be noted here that Seward is situated on the shores of Resurrection Bay and is the southerly terminus of the Alaska Railroad and is the northerly terminus of the main steamship line which serves Alaska. Out of Seward runs another steamship along the shores of the Alaska Peninsula and into Bristol Bay, as well as smaller motor vessels to other parts of the general region. The Kenai Peninsula district has probably attracted more attention as a farming region in recent years than almost any other part of Alaska, except the Matanuska Valley in which the Government has recently aided in establishing a number of farm families. The climate of Kenai Peninsula is comparatively mild, the soil is deep and fertile, and the rainfall sufficient without being excessive. It is reported that 58 families moved into this region last year immediately north of Homer. At the present time, however, the country is not accessible because, except for a very short distance out of Homer, no roads exist. A farmer away from a road on the Kenai Peninsula is so effectively isolated that the settlement of the country cannot proceed until the road is built.

Moreover, the adjoining waters of Cook Inlet and Kachamak Bay contain plentiful supplies of salmon and herring. The packing season for both species of fish is so short that the settlement of farmers in the region would aid greatly to a balanced economic life.

The construction of this road is absolutely necessary for the development of the district to be served, and the district in question is one which, according to all present indications, would be rapidly settled and would maintain in comfort a considerable population if the road were built. The chamber of commerce of the village of Seldovia, situated on the south shore of Kachemak Bay, has received hundreds of letters from prospective settlers inquiring about conditions in the region, and more than 1,300 people already residing in the district who would be directly or indirectly benefited by the road have joined in a petition for its construction.

The period of construction of this road would probably cover three working seasons in order to do the work economically and without the establishment of an unduly large working force.

Fairbanks-Chena Hot Springs System

Estimated to complete..... \$530,000

This route is now supplied by winter train and is entirely inaccessible in summer except for airplanes. Agitation for a summer road has been going on for 16 years. The construction of such a road would provide access to a known health resort and to producing placer fields, thus providing increased employment. If work is commenced at the beginning of any season it may be completed economically in three seasons or within a total period of 30 months. No complete engineering data is available, and therefore no reliable estimate of the ultimate cost can be given.

While the Fairbanks Chena Hot Springs system is stated separately and the Livengood road is considered, and properly so, as an individual project, in reality the Fairbanks-Chena Hot Springs-Livengood system should all be included in one set-up of roads for that region. It is realized, of course, that not all of it can be put into construction at once, so particular emphasis has been placed, first, upon the completion of the Livengood road, and, second, the Fairbanks-Chena Hot Springs project. But ultimately Rampart should be connected with the others, and when that is done the larger part of the road-building program for that particular region will be well taken care of.

Nenana-Bonnifield Country

The Bonnifield country has definite possibilities for both placer and lode development. The Alaska road system should be extended into that district. Such a road, like many others des-

cribed, is bound to lead to largely increased mining operations and thus to increased employment.

Snag Point-Lake Aleknagik

Estimated to complete..... \$125,000

This proposed road would connect Snag Point on Bristol Bay with Lake Aleknagik, out of which Hood River flows, thus more adequately opening to development a mining and fishing region. Recently a road was built between Snag Point and Kanakanak which would be extended on to Lake Aleknagik by the proposed construction. The population of the region is increasing, and by reason of the wealth of its fisheries and prospects inland for mineral development there is ample justification for construction of the road desired.

Naknek-Egegik

Estimated to complete..... \$200,000

Naknek and Egegik are settlements on the shores of Bristol Bay. Large salmon-packing operations are carried on at each place. Traveling in the summertime is confined to small boats, either those using sails or powerboats. No shelter is available for 40 miles. In this connection it is worthy of note that commercial fishing in Bristol Bay is confined to sailboats, and no powerboats are permitted to be used. A reindeer company owns a herd of approximately 5,000 reindeer stationed at Naknek. The surplus deer of this herd could be quite extensively used by the people employed in the salmon-packing operations, but under present conditions no market can be obtained by reason of lack of transportation. If the road were built, the reindeer owners would be able to sell their meat to the canneries. A road through this part of the country would be easy to build, since it is mostly flat country, containing some graveled hills, with no heavy rock-work to be done and no large streams to be crossed. Many sturdy pioneers already make their homes in that region. Their comfort and material welfare would be greatly enhanced and the population of the district enlarged by the building of the proposed road.

Georgetown-Flat (50 miles)

Estimated to complete..... \$500,000

The construction of this road would effect a saving of 2 cents per pound on all freight going into the Flat district, (annual

gold production over \$400,000) and make it possible for lower-grade placers to be worked. More than 1,000 tons of freight were required last year. It would also provide much cheaper transportation for placer workings on the immediate route and make accessible promising quicksilver prospects. It would allow the Flat district to receive freight from 2 to 4 weeks earlier in the spring, and 2 to 4 weeks later in the fall. Its construction would solve the problem now being agitated of changing the course of the Iditarod River to permit small boats to reach Iditarod City. At present they are obliged to discharge their cargo on the banks three-fourths of a mile from the warehouses except at high-water stages. If work is commenced about June 1 of any year it can be completed in three working seasons, or within a period of 30 months.

Nome-Council

Estimated to complete..... \$200,000

The Nome-Council road is a road commencing at Nome extending back to the foothills and then taking an easterly direction crossing the Flambeau, Eldorado, and Bonanza Rivers to Solomon River, and thence on to Council on the Niukluk River, a total distance of about 75 miles. Out of Nome a road now exists about 43 miles and the balance of the route is supplied after a fashion, by a sled road. The motor road should be completed to Council in order to furnish adequate transportation for that entire region. All of the rivers crossed have been and still are producing placer gold and some of them, like Solomon River and Ophir Creek, have produced many millions. With respect to many of them, on account of the existing high cost of operation due in part to high cost of transportation, only the highgrade ground was worked. Here again is a field for operating low-grade ground and thus furnishing employment to many people.

Nome-Teller

Estimated to complete..... \$360,000

Teller is quite an important settlement on Port Clarence--the harbor is measurably protected. The distance between Teller and Nome is approximately 80 miles. A road would be of very much benefit to all of the people of that region. At the present time a road has been built out of Nome going by way of Little Creek and turning westward across Snake River to the Third Beach line of Sunset Creek, a distance of 12 miles, which is the end of the road at present. The road should be extended westward across Penny, Cripple, and Sinrock Rivers to the Bluestone and Gold Run Creeks, and thence on to Teller. All of the creeks mentioned have been

producing gold for more than a quarter of a century but only the richest spots could be mined under the conditions that have existed in regard to roads.

Copper Center-Chickaloon-Palmer

The Richardson Highway, extending from Valdez on the southerly seaboard of Alaska to Fairbanks in the interior, passes through the settlement of Copper Center, about 103 miles north of Valdez. The Anchorage-Matanuska Valley region is supplied by a local road system recently materially enlarged and expanded. No connection exists, however, between the Matanuska Valley-Anchorage region and the main highway system of Alaska, of which the Richardson-Steese Highway is the principal part. Eventually a road should be built from Copper Center by way of Tazlina River over the summit, which is not high, down the Chickaloon, and thence on to Palmer, there to connect with the Anchorage-Matanuska roads. (No estimate is given of the cost because engineering data are not available).

Cordova-Thompson Pass

Cordova is a substantial city on the southern seaboard of the main body of Alaska. It is the seaboard terminus of the Copper River & Northwestern Railway. Eighty miles to the north lies the city of Valdez, which is the seaboard terminus of the Richardson Highway. In order to give the Cordova region access by highway to the interior of Alaska a road, if geographically feasible, should connect Cordova with the Richardson Highway, and that connection can probably be made at or near Thompson Pass, about 26 miles northerly from Valdez. At the present time no sufficient survey of such a connection has been made to determine whether the building of such a road is practicable, but many who are acquainted with the country through which the road will pass say that it is. Therefore it is included in this list of road projects for Alaska.

Beaver-Caro-Little Squaw

Estimated to complete..... \$290,000

Total estimated cost \$300,000, of which \$10,000 has already been allotted from Public Works funds. A winter sled road now serves placer operators and quartz prospects in this district. Recent developments indicate that prominent mining concerns have done sufficient work on one of the lode prospects to warrant a continuation of expenditure probably leading to actual mining. This will necessitate summer traffic to this district. It is proposed to con-

struct a summer tractor road for this purpose at a cost of \$300,000. The total distance is 120 miles. If work is commenced at the beginning of any season it may be completed economically within three seasons.

McCarty-Canadian Boundary

Estimated to complete..... \$2,250,000

This proposed road is part of the so-called International Highway through British Columbia and Yukon Territory, Canada, into Alaska to connect with the present Richardson Highway in Alaska at McCarty. The road is described in the Report of the Commission to Study the Proposed Highway to Alaska. This project is of the greatest importance to Alaska as a whole, and if constructed under a general agreement with Canada to construct the portion of the route through that country necessary to reach the United States, it should be given very early priority. It seems likely that not less than four summer seasons will be required to complete the Alaskan sections requiring 182 miles of new construction accessible now at only two points. It seems also probable that the same length of time will be necessary for the construction of the proposed highway which lies in British Columbia and in Yukon Territory.

The construction of the McCarty-Canadian boundary road in, of, and by itself is amply justified and construction should be undertaken immediately even though the remainder of the International Highway is not built at the present time, for the reason that the building of this road, which lies entirely in Alaska, will make accessible for development enormous areas of placer-mining ground, some of which has been worked for years, and will make available for exploitation and development large areas of what is generally referred to as low-grade ground, thus very largely extending placer operations and leading to greatly increased employment. One feature of road building in Alaska is that the construction of most of the roads under consideration will not only give employment during the construction period but the building will make available for development large areas of mining country as well as agricultural lands, and in the mining country alone it is estimated that the building of the roads will give employment to at least 2,000 additional men for many years to come. Hence the benefits of the building of the roads here recommended are of very large scope and extend indefinitely in the future. In this connection it should be noted that, according to a report of the Department of Agriculture, the building of this road will make available and accessible for settlement approximately 750,000 acres of the best agricultural land in Alaska located in the Forty-mile country. The building of this road would give direct road connection with the

very important city of Dawson in Yukon Territory, Canada, since an existent low-grade road extends westerly from Dawson to a point very close to the boundary between Yukon Territory and Alaska.

In addition to its local benefits, as above indicated, the McCarty-Canadian boundary road is an integral part of the proposed British Columbia-Yukon-Alaska Highway.

Congress did not appropriate the needed funds. While some of the projects eventually were built, others never emerged from the planning stage. Indeed, not until 1948 did Congress approve an accelerated road construction program - and that step was made necessary by the Cold War.

FOOTNOTES

1. Hawley Sterling, Transportation in Alaska, pp. 18-19, 1945. Manuscript in the possession of Ben Stewart, Fairbanks, Alaska.
2. Ibid., p. 19.
3. Stephen E. Mills and James W. Phillips, Sourdough Sky: A pictorial history of flights and flyers in the bush country (New York: Bonanza Books, MCMLX), pp. 111-112.
4. Alaska Road Commission, Annual Report, 1935, p. 4.
5. Hawley Sterling, "Transportation in Alaska," pp. 19-21, Manuscript in the possession of Ben Stewart, Fairbanks, Alaska.
6. Alaska Road Commission, Annual Report, 1933, p. 6.
7. Ibid.
8. Ibid., p. 8.
9. Ibid.
10. Ibid.
11. Ibid., p. 9.
12. Ibid.
13. Ballaine to Ickes, September 16, 1933, R. G. 30, Alaska Road Commission, Box 65481, Federal Records Center, Seattle, Washington.
14. Ibid.
15. Troy to Ickes, October 2, 1933, R. G. 30, Alaska Road Commission, Box 65481, Federal Records Center, Seattle, Washington.
16. Alaska Road Commission, Annual Report, 1934, p. 10.
17. Minutes of hearing on application of the governor of Alaska for a permit to construct a bridge across Gastineau Channel, November 8, 1933, R.G. 30, Alaska Road Commission, Box 65482, Federal Records Center, Seattle, Washington.
18. Ibid.

19. John W. Troy, "Alaska Road, Air Field and Other Related Projects Recommended to Honorable Harold L. Ickes, Secretary of the Interior for Construction under the Public Works Section of the National Industrial Recovery Act," November 27, 1933, Troy to Ickes, March 13, 1934, R.G. 126,, Central Classified Files: 9-1-55; N.A., Alaska Road Commission, Annual Report, 1934, p. 43; Annual Report, 1933, p. 2.
20. John W. Troy, "Alaska Road, Air Field...."
21. Chief of Bureau, Bureau of Public Roads to Secretary of the Interior Ickes, April 22, 1935, R.G. 126, Central Classified Files, 9-1-55, N.A.
22. Ibid.
23. Alaska Road Commission, Annual Report, 1934, p. 1.
24. Exerpt, Cong. Record, 74C, 2S., "Roads for Alaska," Remarks of Hon. Anthony J. Dimond, June 16, 1936, Anthony J. Dimond Papers, Box 32, file Roads, folder A, University of Alaska Archives, Fairbanks, Alaska.
25. Ibid.
26. Ibid.
27. Ibid.
28. Ibid.

CHAPTER FOURTEEN

THE LATTER YEARS OF THE LEAN 1930s

Year after year it was the same story - endless requests for roads from all sections of Alaska, but too little money to meet these needs. For example, there were the mining operations in the Cache Creek Mining District near Talkeetna. Merle H. Guise, the vice-president and consulting engineer for the Peters Creek Mining Company, Inc., one of the operations in the area, appealed to the Commission to improve the Peters Creek Road and airfield "so we really could go ahead and mine. I mean in a real manner, so as to get some real 'dust' out, and some freight in, and I know my people would back me in this section or any section where there was a chance of really 'opening up'...." Although willing to help, Ike P. Taylor, the Chief Engineer of the Alaska Road Commission, was pessimistic about the outlook for the 1936 season. Appropriations for Alaskan roadwork in the Department of the Interior budget were meager. Taylor doubted that the Commission would be able to undertake any extensive road improvements in the Talkeetna district, because expected funds provided only for maintenance and minor improvements to the existing road system. Guise, of course, was disappointed by the unwelcome news. Not much work remained to complete the road up Peters Creek from the Peters Creek bridge on the Talkeetna-Cache Creek Road. It only needed to be widened sufficiently to allow tractors to haul in the large machinery ready for assembly. "The areas of pick and shovel [mining] ground remaining in this and other placer camps" in Alaska is limited, Guise told Taylor, and "it is absolutely necessary that we have some better means of transportation if we are to operate in any practical manner." This included the proposed airfield, for the existing landing strips were only safe for winter operations and "extremely unsafe for summer use." Guise believed that the mining operators in the district could guarantee a sufficient tonnage for weekly air service from Anchorage. Guise clearly was frustrated. Petitioning for roads and airfields season after season had only brought piecemeal results. Air fields, such as the one his

company requested, were far more important for developing Alaska than spending enormous sums on a few large airports, Guise asserted, and it was particularly stupid to waste millions of dollars "in a vain effort to grow pineapples or coconuts or whatever it is hoped to grow in the Matanuska Colony...." Guise referred to President Franklin D. Roosevelt's New Deal effort which had resettled some 200 families from Michigan, Wisconsin, and Minnesota in the Matanuska Valley, approximately 50 miles north of Anchorage. Clearly, Guise was frustrated and promised also to appeal for help to the Territorial Board of Road Commissioners for help on the road and airfield because it was "extremely vital that we have better transportation this summer if we are not to be checked or defeated in this venture...." He intended to "use every means at hand to secure such improvements, or to find out why legitimate mining ventures and worthwhile mining districts are neglected while wellnigh worthless and useless projects are flooded with money from several sources. "Guise obviously exaggerated, because projects seemingly worthless to him served the vital needs of some other user constituency. The complaints of Guise and his fellow miners, however, were effective, because the Commission expended \$5,514.25 on the Talkeetna-Cache road, and \$19,067.81 on the Peters Creek road in the 1936 working season.¹

Talkeetna - Cache Creek Mining District

During the 1938 construction season, the Commission expended further funds in the Talkeetna-Cache Creek mining district. At the end of February, the Anchorage district office of the Commission sent a bridge crew of nine men to Talkeetna. The men arrived in Talkeetna on the same day about midnight, and the next day started moving equipment across the Susitna River. After establishing camp at the Peters Creek bridge, the men demolished the old wooden bridges across Peters, Croto, and Upper Peters Creeks and replaced them with a 150 foot span on steel piling piers, an 80 foot span and two 18 foot steel approaches, all on steel piling piers, and a 56 foot girder span, on concrete piers

resting on solid rock, respectively. A. F. Ghiglione constructed the first two bridges, and Amos Morse the last one. At the end of the season, Superintendent M. G. Edmunds reported that the total cost of the bridges had been as follows: Peters Creek bridge \$10,079.36, Croto Creek \$5,885.72, and Upper Peters Creek \$5,212.61. The Commission continued to spend funds for maintenance and improvements in the Talkeetna-Cache Creek district. In 1939 it amounted to \$37,020.32; in 1940 it came to \$21,731.67, with another \$150.76 for the Talkeetna airfield; in 1941 it amounted to \$21,342.05; in 1942 to \$24,175.94; and it declined to \$11,215.05 in 1943; to \$3,206.86 in 1944, and again rose slightly to \$5,830.12.² The War Production Board issued the "Gold Mining Limitation Order L-208" on October 8, 1942 which made the industry non-essential to the war effort. In 1943, gold production dropped 20 per cent over the previous year's level, and the industry never really recovered from the near shutdown during the war. With a deemphasis on gold mining, the Commission used its funds for work on the main road system and work in and near Alaska's urban centers.

The Iliamna Lake District

Alaska's residents lived in widely scattered locations, and every settlement at one time or another appealed to the Commission to construct relatively short roads connecting to the railroad, a major road, or to tidewater. For example, in early 1936 the Seward Chamber of Commerce petitioned the Commission on behalf of the people of the Iliamna Lake District to extend the existing Iliamna Bay Pile Creek road another 2.5 miles to the shores of Iliamna Lake. The Commission had built the existing road in the 1920s. Substantial freight came over the road, but lake boats and scows were unable to ascend Pile Creek to the end of the road. Therefore, smaller craft had to be used on the leg from Pile Creek to Iliamna Lake, where the freight once again had to be transferred to larger boats for distribution to points along that body of water. There was no money to respond to the request that season, so in early 1937, residents of the region

prepared a petition and a summary of why roads were needed in the Iliamna and Lake Clark region. At the present, the petitioners pointed out, the region could be reached via the Kvichak River from Bristol Bay. The first route, they argued, was long, costly, and not always satisfactory because of the tides and unpredictable weather in the Bay. This caused time delays and soaring freight rates which discouraged potential settlers from coming into the region. A great deal of money already had been spent on the Iliamna Portage, but it could not be fully utilized because of the swiftness of the Iliamna River which constantly shifted its channels and which only small skiffs equipped with outboard motors could navigate. Unfortunately, even this was impossible for a large part of the shipping season because the water was so low that motors were often damaged. It was almost impossible to haul large amounts of supplies downstream during the dry months of June through August. Goods, therefore, had to be piled up on the bank of the Iliamna River waiting for high water. What was needed to remove this bottleneck, the petitioners pointed out, was the construction of a 2.5 mile road from the Portage to Pile Bay. The Commission already had surveyed the route, the petitioners pointed out, so their request was not a new one. From Pile Bay, lake boats easily could haul freight and supplies, which would increase traffic over the portage which had been under-utilized.

Road from Iliamna Lake to Lake Clark

The petitioners also argued that the Commission should build a road, approximately 14 miles in length from Iliamna Lake to Lake Clark. The shores of the latter offered ideal residential sites as well as homesteads. The soil, after proper cultivation, yielded many types of vegetables and domestic plants. In fact, even strawberries thrived on the shores of the lake, and there was no telling what a garden enthusiast might be able to do."⁴

Mineral Deposits

In addition, the region contained valuable metal deposits such as gold and copper, and many prospectors already held mining claims," anxiously waiting for proper transportation facilities so that they could easily bring in the needed machinery." In short, the construction of these two roads would be of great benefit to Alaska because it would result in increased revenues from taxation. The region, blessed with favorable climate, had needed no federal assistance. In fact, all White and Native families as well as individuals were self-supporting. Progress, however, demanded the construction of roads. This task, however, was the responsibility of the Territory "desiring such progress" and could not be undertaken by individuals. These arguments must have been persuasive, for in 1937 the Commission allotted \$4,646.55 for the project, and this rose to \$32,833.40 in 1938, enough to finish the two projects.⁵

Telephone Communications

Roads and trails enabled Alaskans to obtain supplies, develop mineral properties, and reach the outside world. Telephone communication enabled residents to make immediate contacts with one another, relay vital information, and request help when needed. In the first decade of the twentieth century the U.S. Army had constructed a lengthy telegraph system linking Alaska with the outside world. After radio communication made the telegraph line obsolete, the Signal Corps abandoned it. In 1926 the Alaska Road Commission took over the line from Valdez to Fairbanks, a distance of 371 miles, and maintained and operated it. In 1927, the Commission constructed a branch line of 39 miles to Chitina, and added another 106 mile branch line to Nabesna in 1930 to 1934 in connection with road construction in that area. In 1936, the Alaska Road Commission owned a total of 516 miles of line. Construction had cost \$3,264 and the average cost of annual maintenance amounted to \$6,500. The highway line connected the Fairbanks switch-

board to all city phones. Furthermore, phones had been installed in all roadhouses and construction camps along the route. In addition, the Commission maintained a small switchboard at Copper Center, which served to connect Nabesna, Chitina, and Valdez. It was impossible to obtain a through connection from Fairbanks to Valdez, but messages to the latter city could be relayed via the Rapids Roadhouse. The old line, however, was not in top shape and it was impossible to maintain uninterrupted service at the level of maintenance performed. This was particularly true after the Commission camps along the route had closed for the winter season.⁶

Comptroller General Critical

Within a short time, the Comptroller General of the United States wanted to know if the Commission collected tolls for the phone services it provided. The answer was negative. The Commission requested the Fairbanks Telephone Company to run the line through its exchange, and allowed it to make a charge to reimburse it in exchange for the services rendered. Rates charged varied from a low of \$0.25 from Fairbanks to mile 18 on the Richardson Highway to a high of \$0.75 for a call from Fairbanks to Rapids. There were no charges for official government calls. All roadhouses south of Rapids paid a modest fee directly to the operator of the Copper Center switchboard of the Alaska Road Commission. Taylor explained that it would have been absurd to charge tolls for a telephone service which was so unreliable, particularly after the Commission camps had closed for the winter season. He estimated that the Fairbanks Telephone Company probably collected no more than \$250 per annum for its services. Taylor doubted that the company would handle this service for any less money than it now received. If the government decided to discontinue the service through the Fairbanks Telephone Company exchange, Taylor pointed out, it would inconvenience the Commission, and require the installation of additional phone equipment in its Fairbanks office, warehouse, shop and garage.⁷

Federal Investigation

The Comptroller General investigated the matter, and reported that the Fairbanks Telephone Company collected approximately \$720 per annum, rather than the \$250 Taylor had estimated, from calls made over a line built and maintained at public expense. There was no compensation to the United States. In addition, the Commission now had installed and maintained a government-owned switchboard in the home of Frank H. Carroll at Copper Center which served 386 miles of telephone line south of Rapids. The Comptroller General discovered that Carroll was an employee of the Commission who worked as a telephone line repairman at a rate of \$8.00 per day when actually needed. His wife, Wayla Carroll, served as Commission telephone operator at a salary of \$420 per year. The Comptroller General was shocked to discover that as additional compensation, Frank H. Carroll was permitted to charge individuals and business concerns for the privilege of connecting privately-owned telephones to the government line and retain the proceeds for his personal use. The Comptroller General estimated that this amounted to an additional \$3,000 per year.⁸

Formal Contracts to be Drawn

The Comptroller General objected to this casual arrangement, and insisted that formal contracts be drawn up and the proceeds split between the private operators and the federal government. Taylor agreed to comply with the wishes of the General Accounting Office. The Fairbanks Telephone Company stated that in order to split the receipts, toll charges would have to be doubled to make it worth its time to handle them. R. J. Shepard, the superintendent of the Chitina Commission office, recommended that a full-time operator be hired and the Commission collect the tolls. He insisted that Wayla Carroll receive the civil service appointment as operator. The Carroll family had given seven and a half years of excellent service to the Commission, in fact had built their family life to fit the job, and there-

fore should be kept on. Mrs. Carroll was a paid observer for the U.S. Weather Bureau, and these duties fit in well with those of a switchboard operator. In any event, Shepard was anxious to get the matter resolved in a fashion acceptable to the General Accounting Office.⁹

Tolls Increased

In the middle of June 1939, Chief Engineer Taylor increased the toll rates for the Richardson Highway line by about fifty percent, and announced that the Fairbanks Telephone Company would collect the monies under the terms of a contract. For the Carrolls the Chief Engineer drew up a formal contract. Taylor then asked the General Accounting Office to review the two documents, and if not satisfactory, indicate what changes were necessary. He asserted that the Commission was anxious to comply with General Accounting Office guidelines, "even to the extent of abandoning the line if there is no other alternative." He was reluctant to do that however, because the line passed through "a pioneer section where communication facilities are wholly lacking," and numerous small mine operators depended on this service. The General Accounting Office, however, objected to the contract between the Commission and Frank H. Carroll because it was for personal services in connection with the maintenance and operation of the telephone exchange at Copper Center for a fixed sum plus certain phone rentals. At the same time it contemplated using the services of the contractor as a lineman, when needed, at a wage of eight dollars a day. This not only involved dual employment and double compensation contrary to law, but also involved the expenditure of receipts which, by law, had to be deposited into the Treasury of the United States as miscellaneous receipts.¹⁰ The General Accounting Office had expended thousands of dollars in investigating and reporting upon a matter which involved about \$3,000 per year. Unwilling to make exceptions for Alaska's unique circumstances, it destroyed a telephone system which, albeit primitive, had served the Alaska Road Commission and numerous

residents very well for a number of years. Fortunately, radio communication came into use during World War II and made the primitive telephone system totally obsolete.

Mileage Abandoned

Alaska was in a period of transition. As already pointed out, the heavy use of the airplane and the decline of the mining industry enabled the Alaska Road Commission to slowly abandon many shelter cabins, various short roads, and some trail mileage. In 1936, for example, the Commission abandoned the Donnelly-Washburn project which had cost a total of \$33,460.06 for construction and maintenance through June 30, 1936. Ester-Dunbar at \$19,405.18, Fox-Steel Creek at \$855.75; Vault Creek at \$4,875.20; Gilmore Creek at \$1,562.00; Mile 34-Lynx Creek at \$22,192.66; Bessie-Dry Creek and Dry Creek-Newton at \$3,289.20 and \$623.74, respectively; Glass Gulch at \$1,125.73; Center Creek at \$2,803.80; Lewis Landing-Dishkaket and Nulato-Dishkaket at \$483.37 and \$735.88, respectively; Kern Creek-Knik and Kenai Lake-Kern Creek at \$13,891.95 and \$6,833.20, respectively; Mile 27-Mile 29, Alaska Northern Railroad at \$741.66; Kenai Lake-Mile 27 Alaska Northern Railroad at \$1,595.81; Kern Creek-Indian Creek at \$3,758.26; Knik-Susitna at \$8,437.44; Dishkaket-Kaltag at \$4,290.00; Susitna-McDougal at \$8,640.21; McDougal-Cache Creek at \$7,350.00; Lakeview-McDougal at \$3,675.00; Cripple and Penny Rivers at \$8,801.79 and \$1,967.08; Otter Creek at \$1,802.52; Kugruk River Approach at \$488.00; Otter Creek Towpath at \$488.23; Summit-Otter Creek at \$5,047.66; Fairangel Extension at \$104.20; Moose Creek-Baxter at \$2,218.62; Valdez-Quartz Creek at \$524.75; Valdez-Glacier at \$616.91; Shoups Bay at \$3,457.25; Katalla-Chilkatat \$7,752.56; Elliott-Kotsina at \$6,858.42; Brooks Tram at \$63,455.39; Cripple-Lewis Landing at \$100.00; and Matanuska-Chickaloon at \$11,268.30. That was just for one year. The Commission also turned over numerous projects to other departments for continued improvement and maintenance, such as the Juneau-Sheep Creek road and the Sunrise-Hope connection. Still, at the end of the 1936 fiscal year the Commission boasted of 2,037 miles

of road and tramroad, most of it suitable for automobiles, 1,630 miles of winter sled road, 7,151 miles of trail and 314 miles of flagged trail. As of June 30, 1936, the Commission had expended \$22,958,891.09, of which \$12,104,550.55 had been utilized for new work and \$10,854,340.54 for maintenance and improvement.¹¹

Status of Roads in 1940

By June 30, 1940, roads and tramroads had grown to 2,212 miles of which about 80 percent was suitable for automobile travel; winter sled roads had decreased to 1,464 miles and trails to 6,494 miles and flagged trails to 240 miles. By June 30, 1945, automobile roads had grown to a total of 2,517 miles while winter sled roads had further decreased to 1,250 miles, and trails and flagged trails to 4,115 miles and 164 miles, respectively.¹²

Trails in the Bethel Area

There were regions in Alaska, however, where Shelter cabins and trails continued to be important. The Bethel area in western Alaska was a good example. Located on the Kuskokwim River, the settlement was a supply center for villages throughout the region. H. M. "Big Hans" Hansen contracted with the Commission for the construction of shelter cabins and the staking of trails. Work in these remote areas was difficult, at best. Hansen was to build a few shelter cabins, but noted that the construction material he had received "all green and wet and the time" he handled it. He also told the Commission that additional lumber needed to be purchased locally, at higher prices, to compensate for the shrinkage. He discovered, for example, that "none of the 8-inch lumber measures over 7-inches; there is also a lack of extra lumber to take care of the door and window casings." Hansen was an experienced builder. He recommended double-pane windows, with celotex and building paper. Solid insulation was a necessity, he pointed out, because there was little heating fuel along the trails.¹³

Metal Pipes a Failure

Staking trails with pipes in the region had been a failure, Hansen stated, because most of the pipe driven into the ground between the Bethel-Goodnews Bay trail leaned at a 45 degree angle. The metal pipe was a perfect conductor for the sun's heat, thawing the permafrost to the bottom of the pipe. Strong winds, common in that section, caused the pipes to lean over. None of the pipe had been driven less than three feet. Whenever the ground had proven too hard to drive the pipes, workmen had built tripods, and these had withstood the climatic elements exceedingly well. Hansen recommended the erection of tripods to mark the trail from Johnson River to Kinak Village, and from Bethel to Nuntchak. Hansen offered to tripod the trails at \$32.00 per mile, with tripods 500 feet apart. Since there were not enough iron pipes on hand, Hansen proposed to use spruce poles to make up the shortage. Hansen also offered to build the shelter cabin on the Johnson River to Kinak Village trail, including two extra windows, stove and stove pipe for \$500.00, "work guaranteed and job complete before July 1, 1937 - but will not take the job for day labor. This is the best I can do and if satisfactory with the A.R.C. let me know at earliest date. All my work is guaranteed or no pay." Hansen's offer was acceptable to Chief Engineer Taylor, although he reminded Fred J. Spach, the assistant engineer of the Commission in Anchorage that it still was necessary "to write up invitations and call for bids at Bethel." This was a necessary legal formality, Taylor implied, and continued that Spach should send Hansen "an invitation direct and it will, of course, be necessary to explain to him that it is impossible to give him the work on contract without formally calling for bids." The Commissioner awarded Hansen the contract for building the shelter cabin in that same year, and the one for trail staking in 1938.¹⁴

The Cook Inlet-Kenai Peninsula Region

Although nobody had any inkling in the late 1930s that the Cook

Inlet-Kenai Peninsula region would experience dramatic growth in the post-war periods, settlers already had started moving into the area in the late 1930s. The region's towns still were small. Anchorage, for example, had a population of only 2,736 in 1930, and Seward a modest 835. By 1940, Anchorage had almost doubled to 4,229 souls, and Seward had registered a small increase to 949 residents. Mr. C. Edmunds, the Commission Superintendent in Anchorage, noticed the growth on the Peninsula on a visit to Homer in early 1939. While there, he attended a meeting of the Homer Civic League whose members told him, that there had been an influx of families into the Homer district within the last two years. Since all the lower benches in the vicinity already were homesteaded, these folks had taken out land on the higher benches to the west of the settlement. No roads existed to serve these newcomers, and eventually numerous spur roads would be required to reach the various homesteads. League members suggested that the Commission should begin a survey for a road between Homer and Kenai, because that would let prospective settlers know where to locate.¹⁵

Proposed Road from Kenai to Homer

Taylor thought the idea of having settlers located along the line of a proposed road a good one - but "when we put in stakes for a road the people will reasonably expect that the road will be built soon." With the small funds available, he stated, the location had to be a short one so as not to disappoint the settlers. At the end of 1939, the newly-formed Kenai Development League of Homer, Alaska, appealed to the Commission, Territorial Governor Ernest Gruening and Delegate to Congress Anthony J. Dimond to funnel some territorial or Works Progress Administration money into their region. About 320 individuals resided in the area, and many needed immediate work relief. If funds could be obtained, these people could be put to work to build sorely needed roads connecting the homesteads to the already existing system. In addition, the Homer dock needed repairs badly. It was the community's only facility through which vitally needed supplies could be

brought in. The League estimated that \$18,000 would at least start the work. Superintendent Edmunds met with League members and listened to their request, but cautioned that funds were limited.¹⁶

Access Road to Homer Homesteaders

By 1940, however, the Commission had started to build a road along the high benches where several newcomers had settled. This irked some of the older settlers, and John Brandvold, their spokesman, protested the location, stating that the road on top of the bench would be useless to those who had homesteads on the lower benches. Furthermore, the top of the bench would be blanketed by snow anywhere from six to ten feet deep. The location along the side hill Brandvold and his group had asked for would be "bare of snow entirely and this road will be bare at least three months longer each year than any of the roads that you can build on top of the ridge." What Brandvold and his group objected to was that they would have to climb to the top of the bench to reach the road and "go at least three times as far to get to the store and post office...." Had the Commission accommodated their wishes and built a road along their homesteads, the distance to the store and post office would be shortened by three to seven miles. "That means a whole lot in the winter," Brandvold concluded, "when the days are short and the weather is cold and the snow is several feet deep."¹⁷

Complaints Unjustified

C. Arvid Swanson, a spokesman for the majority of the homesteaders in the Homer area was acutely embarrassed by the complaints of Brandvold's group. He assured the Commission that the majority of residents realized that road building funds were limited and not everything desirable or needed could be accomplished in a year. In short, most everyone agreed that "the Road Commission is doing a fine job and the majority are more than pleased with the way the work is progressing." Taylor was pleased with Swanson's assurances, and told Brandvold that "no subversive in-

fluence has been brought to bear to cause the road to be located along the top of the bench rather than to build the long grade up the hill" as his group had desired. With the large number of settlers in the region it was "impossible to provide a road to each man's homestead and it was felt if we could get in the main roads that each individual homesteader could then ready the road nearest to him.¹⁷ Obviously, the Commission had carefully considered the various alternatives, and decided, as in other cases, to put very limited funds into the construction of trunk roads in the best location to serve the greatest number of people.¹⁸

Small Appropriations

Unfortunately, it was apparent that appropriations for the Alaska Road Commission under the Department of the Interior were consistently less than what they had been under the last ten years under War Department Administration. The years from 1932 to 1941 were extremely lean ones for the Commission, and all it was able to do was to maintain the 2,200 miles of low-standard roads, with small improvements, and try to maintain the 10,000 miles of trails which had been constructed by 1932. As already stated, the Commission was able to abandon some trail mileage during this decade and use the savings for small improvements to existing roads. The Commission submitted adequate estimates to the Department of the Interior each year, but nobody there really fought for the agency before Congress. Alaska's Delegate to Congress, Anthony J. Dimond, had submitted a ten-year, twenty million dollar road construction plan to Congress in 1936, as already mentioned. All to no avail. Early in 1938 Delegate Dimond tried again when testifying before the subcommittee of the House Appropriations Committee concerned with the activities of the Department of the Interior. He opened his remarks by stating that it was very difficult to make anybody understand the need for roads in a country which had so few. The Department of the Interior had budgeted a mere \$535,000 for the Alaska Road Commission for 1939. That amount, Dimond pointed out, was not even

sufficient to maintain the existing system, and "if we are going to develop Alaska, we must have more money for roads. We are simply at a standstill with \$535,000." Dimond asked for many other items, such as funds for the construction of emergency airfields and airports, for the rehabilitation of the Alaska Railroad, and for defensive installations, among others. Dimond told his colleagues that Alaska was situated on the direct line between the Orient and the United States. Should a hostile power seize Alaska, it would be within 747 miles of Seattle, Washington, "a nice comfortable airplane range." Alaskans demanded to be protected by their government, because without that protection they knew that they would be the first victims should war break out. Congress did not respond. As planned, it appropriated \$535,000 for 1939.¹⁹

European Events Affect Alaska

One event in far-off Europe eventually was to effect Alaska in a revolutionary fashion. On September 1, 1939, Germany's armed forces invaded Poland, and on September 3, Great Britain and France declared war on Germany. World War II had begun. In the spring of 1940, Nazi forces invaded Denmark and Norway. For the first time, Congressmen realized that the Scandinavian Peninsula was just over the top of the earth from Alaska, and that bombers, which could fly such a distance, existed. This sudden insight, Dimond later believed, brought about a turning point in Alaska's fortunes and history. In fact, year 1940, Congress appropriated \$39,823,285 for defensive installations, ranging from a Sitka Navy air base to a Kodiak Navy air base, and from a Fairbanks Army air base to an Anchorage Army air base. Dimond remarked that "at least a fair beginning has been made upon the construction of national-defense works and facilities in Alaska." The 1941 appropriation for the Alaska Road Commission doubled, from \$560,000 in 1940 to \$1,130,000 in 1941. Indeed, Dimond believed that much more would be required, including numerous airfields and the long proposed highway to Alaska.²⁰ He did not then know how correct his forecast was, because

between 1941 and 1945, the federal government spent approximately two billion dollars in Alaska, triggering an economic boom far greater than that caused by any of the previous gold rushes.

FOOTNOTES

1. Guise to Taylor, January 8, 1936, Taylor to Guise, January 28, 1936, Guise to Taylor, February 22, 1936, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington; Alaska Road Commission, Annual Report, 1936, p. 32.
2. Edmunds to Taylor, February 16, 1939, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington. Alaska Road Commission, Annual Report, 1939, p. 32; Ibid., 1940, pp. 32-33; Ibid., 1941, p. 25; Ibid., 1942, p. 24; Ibid., 1943, p. 24; Ibid., 1944, p. 21; Ibid., 1945, p. 22.
3. Fryer to Commission, April 1, 1936; residents to Commission, February 4, 1937, R.G. 30, Alaska Road Commission, Federal Records Center, Seattle, Washington.
4. Ibid.
5. Ibid.; Alaska Road Commission, Annual Report, 1937, p. 36; Ibid., 1938, p. 34.
6. Taylor to Hampton, November 24, 1937, R.G. 30, Alaska Road Commission, box 65410, Federal Records Center, Seattle, Washington.
7. Hampton to Taylor, November 30, 1937, Taylor to Hampton, November 30, 1937, Taylor to Hampton, April 14, 1938, R.G. 30, Alaska Road Commission, box 65410, Federal Records Center, Seattle, Washington.
8. Comptroller General to Hampton, April 14, 1938.
9. Taylor to Shepard, April 10, 1939, Taylor to Nash, April 10, 1939 Shepard to Taylor, May 1, 1939, R.G. 30, Alaska Road Commission, box 65410, Federal Records Center, Seattle, Washington.
10. "Notice To all Concerned," June 16, 1939, "Invitation For Bids," June 20, 1939, Memorandum by G. H. Skinner for Fred R. Geeslin, December 4, 1939, Elliott to Secretary of the Interior, December 27, 1939, R.G. 30, Alaska Road Commission, box 65410, Federal Records Center, Seattle, Washington.
11. Alaska Road Commission, Annual Report, 1936, pp. 14-16, 19, 21-24, 26-28, 33-35, 30, 23, 10.
12. Alaska Road Commission, Annual Report, 1940, p. 9; Ibid., 1945, p. 8.
13. Spach to A.R.C., November 28, 1936, R.G. 30, Alaska Road Commission, box 65637, Federal Records Center, Seattle, Washington.

14. Ibid.; Spach to Taylor, February 16, 1937, Taylor to Spach, February 23, 1937, Taylor to Spach, February 24, 1937, R.G. 30, Alaska Road Commission, box 65637, Federal Records Center, Seattle, Washington; Alaska Road Commission, Annual Report, 1937, p. 40; Ibid., 1938, p. 44.
15. George W. Rogers and Richard A. Colley, Alaska's Population and Economy: Regional Growth, Development and Future Outlook, Vol. II, Statistical Handbook (College, Alaska, University of Alaska, 1963), p. 27.
16. Edmunds to Taylor, February 17, 1939. A list of more permanent homesteaders in the vicinity, showing the sections where they were located as follows:

Homestead Owners - Homer and Vicinity
March 1, 1939
Township 5, South, Range 12 West

Sec. 25	James White
Sec. 29	Curtis M. Huffman
Sec. 31	George T. Press Wilhelm Burgie
Sec. 32	Wm. Bechdol Wendell Thurston George Kirkpatrick Thizza G. Holmes Bernard Ekkleboom
Sec. 33	Ernest Edw. Bird
Sec. 34	L. M. Moore

Township 5 South, Range 13 West

Sec. 31	Stanley Jones J. O. Alberson Ray B. Malone Orvan Officer
Sec. 32	Orvan Officer E. L. Bunnell D. E. Mervin
Sec. 33	D. E. Mervin C. E. Halstead M. M. Myers Fred Harbinson
Sec. 34	Fred Harbinson F. E. Nightenhelser
Sec. 35	F. E. Nightenhelser Wm. H. Fletcher Tom P. Caughlin
Sec. 36	Tom P. Caughlin W. J. Frazier

Township 5 South, Range 14 West

Sec. 25	W. F. Borton Wm Scott	Sec. 36	Wm Scott F. A. Wolfe
Sec. 26	Mainhardt Bredt		Howard A. Wilford

Township 6 South, Range 14 West

Sec. 1	Stanley Jones Howard A. Wilford	Sec. 12	R. M. Campbell Joe R. Johnson
Sec. 2	O. L. Jones Edwin Herndon		Robert W. Kranich H. P. Sheard
Sec. 3	Milton Howe Edwin Herndon	Sec. 13	Paul W. Poelette Laura M. Feehan
Sec. 4	Sam Gasparic Dave Jones		Guy Waddell Walter Bell
Sec. 7	Richard B. Gray		Sam Pratt
Sec. 8	Richard B. Gray		Olaf T. Svedlund
Sec. 9	Dave Jones	Sec. 14	Olaf T. Svedlund Sam Pratt
Sec. 10	Frank Hopper Albert L. Hughes	Sec. 15	Andrew O. Aasland
Sec. 11	Homer Lathan Buster Goss R. L. Monroe	Sec. 22	Andrew O. Aasland
		Sec. 23	Sam Pratt Emil P. Rose
		Sec. 24	Sam Prat Guy Waddell H. A. Wells Frank Memec

Township 6 South, Range 13 West

Sec. 1	W. J. Frazier Star Nielsen Ras P. Nielsen Jack Dietz Chas. Sharp	Sec. 6	H. K. Allen Ray B. Malone B. B. Smeltzer Chris Anderson
Sec. 2	Tom Caughlin Donald Ingalls Wm. H. Feltcher Wm. G. Sanford Chas. Miller	Sec. 7	Bob C. Cutler Wm. Laurence E. V. Kirsch Joe W. Tolbert
Sec. 3	Wm. G. Sanford O. S. Woodman	Sec. 8	Frank Selente James Faulk Wm. F. McMichael Karl Rosenberg
Sec. 4	George Dahlgren Floyd Manseth Harold Davies Erling Broderson	Sec. 9	Frank Tucker Floyd Race J. A. Remer Mabel Shotter Mabel S. Svedlund
Sec. 5	George D. Earl Luke M. Wilkerson E. L. Bunnel Orvan Officer H. K. Allen	Sec. 10	Wm. Zook Enoch S. Nordby Edw. S. Slavin J. W. Palmer

Township 6 South, Range 13 West (Con.t)

Sec. 11	Claude D. Graham G. Winnie J. P. Howver Chas. Miller		
Sec. 12	Jack Dietz Chas. Sharp Ras. P. Nielsen Alex Mathesen	Sec. 19	H. A. Wells Frank Nemec Cyrus W. Harrington Mrs. C. W. Harrington John R. Crittendon Glen Bowers M. A. Berry
Sec. 14	Sol Brososky Beers Wm. C. Sec or		
Sec. 15	Edw. S. Slavin J. W. Lamb Grover C. Price	Sec. 20	M. O. Svedlund J. R. Lee Thomas Shelford Carl Sholin Andrew Sholin O. Munson
Sec. 16	Mabel S. Svedlund John Christensen Frank Groth James Waddell Alexander McLarin	Sec. 21	A. A. Mattox Homer Civil League H. G. Kohler
Sec. 17	Milo Kallman Andrew Sholin Virgo B. Anderson M. O. Svedlund	Sec. 22	Homer Civic League Sol Brososky Wm. C. Secor
Sec. 18	Andrew L. Bernard Ole Harrsturd Laura M. Feehan Walter Bell Mrs. C.W. Harrington M. A. Berry	Sec. 23	Wm. C. Secor
		Sec. 27	C. W. Harrington
		Sec. 29	O. Munson
		Sec. 35	Ralph Anderson
		Sec. 36	Ralph Anderson

Township 6 South, Range 12 West

Sec. 3	L. M. Moore	Sec. 6	Wm. Bechdol Wilhelm Burgie George T. Press Ford W. Bechdol Torr S. Lund Levi W. Holmes Lee
Sec. 4	Corlette A. Therian		
Sec. 5	George Kirkpatrick Wm. Bechdol D. C. Liles	Sec. 7	Ford W. Bechdol Torr S. Lund

R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.

16. Taylor to Edmunds, March 9, 1939, Jones to A.R.C., December 9, 1939, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.

17. Brandvold to Taylor, June 16, 1940, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
18. Swanson to Taylor, July 8, 1940, Taylor to Brandvold, July 13, 1940, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
19. Cong. Record, Appendix, 75C., 35, pp. 1382-1385; Alaska Road Commission, Annual Report 1939, p. 1.
20. Naske, An Interpretative History, pp. 56-57; Cong. Record, Appendix, 76C., 3S., p. 4599.

CHAPTER FIFTEEN

THE WAR YEARS

Construction on Alaska's defensive installations had started in a leisurely fashion in 1940. Alaska's Governor Ernest Gruening was vitally concerned with the territory's defenses. In the fall of 1940 he urged the Division of Territories and Island Possessions, to whom the Alaska Road Commission reported, to set aside the Commission's normal budget item, for its construction season and replace it with a much more extensive program emphasizing routes of particular interest in connection with the national preparedness program. Gruening had been informed that the Army would support such a course of action. He therefore recommended that the Division confer with Army officials and immediately prepare the following estimate for submission to the Bureau of the Budget:

A connecting link from the Anchorage road system to the Richardson Highway at a cost of \$1,500,000; extension of the road from Seward across Turnagain Arm of Cook Inlet and into Anchorage at a cost of \$1,000,000; and improvement of the Richardson Highway at a cost of \$2,500,000 for a total of \$5,000,000.

The above projects, Gruening claimed, were indispensable from a military standpoint, but also would be of inestimable benefit for Alaska's development. Should funds be appropriated, the governor stated, they would immediately become available and not lapse until the projects had been completed.¹

Military Priorities

The military quickly responded to Gruening's initiative with its priorities. Lieutenant General John L. DeWitt, the Commanding General of the Fourth Army, and General Simon B. Buckner, Commander of U.S. forces in Alaska, agreed that the Alaska Railroad from Seward to Anchorage had to be shortened and the terminal relocated. This was the first priority. They recommended, therefore, that a 14 mile railroad

spur be built from Portage, 66 miles north of Seward on the railroad, to Portage Canal on Prince William Sound where the new terminus was to be located. The troops at Fort Richardson near Anchorage, then under construction, received all of their supplies, munitions, and personnel from Seward by railroad to Anchorage. Should the Seward port facilities and the railroad be damaged or destroyed, this would cut off the Anchorage garrison completely. Valdez was an alternate port, but supplies destined for Anchorage had to be transported via truck north to Fairbanks and then be shipped out to Anchorage by rail. The second priority was the construction of a highway connecting Anchorage and Valdez via the Richardson Highway at the earliest practicable date and the best route from the standpoint of distance, economy of maintenance, and the ability to keep the road open during the winter. Henry L. Stimson, the Secretary of War, directed that \$5,300,000 be included in the next department budget to cover the estimated cost of relocating the southern terminus of the Alaska Railroad, and requested that Secretary of the Interior Harold L. Icke include \$1,500,000 in his fiscal 1942 estimates for the Alaska Road Commission to cover the cost of building a highway connecting Anchorage and Valdez via the Richardson Highway.²

Another Lean Year in 1940

While the War Department had started the preliminary steps to extract the funds for these two projects from Congress, the Alaska Road Commission had another lean year in 1940. Congress had appropriated \$560,000, as already stated. Added to that was another \$140,000 from the Alaska Fund, while the Territorial Legislature appropriated \$213,085, the National Park Service contributed \$50,300, and individuals and corporations helped out with \$12,341 for a total of \$975,726 for the 1940-1941 year. Accordingly, Commission work was limited mainly to maintenance and some improvement of the existing system. It constructed 19 miles of new roads which consisted chiefly of short extensions or branch roads to existing routes, financed mostly by Territorial monies. It also built 53 miles of new sled roads. Utilizing National Park

Service funds, the Commission widened and graveled the highway through Mt. McKinley National Park to Mile 43.9 and graded the road to Mile 51. It continued to extend the Bunker Hill-Kougarok road an additional 3.75 miles to Mile 14.25; made passable to Mile 8.75 from the river the new road which was to connect the Takotna and Ophir mining districts with steamboat navigation on the Kuskokwim River and also worked on the 1.50 mile stretch from the Takotna road to the Takotna River, and built a 1.25 mile branch road into Candle Creek; the Commission assumed maintenance responsibilities for 60 miles of the abandoned Copper River and Northwestern Railway between Chitina and McCarthy which was used as a tramroad; it maintained the 10 mile branch road from the Anchorage-Palmer road leading to Eklutna Lake, and improved 5 miles of the Eagle-Liberty road leading into the Fortymile mining district for automobile travel. The Commission built three miles of secondary farm roads at Homer, and dug a 150 by 2,000 foot canal, about 8 feet deep, between Lakes Hood and Spenard to create a pontoon landing pond, allowing airplanes 6,100 feet take-off space; and with Territorial funds built new airfields at Nation, Beaver, Stevens Village, Rampart, Wiseman, and the Cliff Mine.³

Defense Money Revives Road Construction

For the 1941 working season, the Commission received \$570,000 from Congress, another \$150,000 from the Alaska Fund, and a \$214,798 appropriation from the Territorial Legislature. Furthermore, War Department endorsement bore fruit in the form of a \$1,000,000 appropriation to start the construction of the Glenn Highway, connecting Anchorage and Valdez via the Richardson Highway. The new road was named after Captain, later Major General Edwin Forbes Glenn, who in 1898 and 1899 explored routes to the Copper and Susitna Rivers, and then searched for a way to the Tanana River from Cook Inlet. In April of 1941, the Commission started work at both ends on the Glenn Highway, but because of the late arrival of equipment work had just gotten well under way at the end of June, 1941. In the meantime, General Buckner, now the commanding

general of the Alaska Defense Command, was convinced that in case of war troops would have to use the Richardson Highway. He had been over the route and found it insufficient for military purposes. Buckner urged Commission members to widen and straighten the highway where needed, strengthen all bridges to accommodate 15 ton loads, and replace the ferry across the Tanana River at Big Delta with a bridge. Thereupon, the Department of the Interior, at Buckner's request, included \$600,000 for the contemplated bridge work, \$124,000 for a bridge across the Tanana River, and \$1,400,000 for improving and straightening the the Richardson Highway where necessary. The War Department endorsed the request as "necessary from the standpoint of National Defense."⁴

The 1942 Season

For the 1942 work season, Congress granted the Commission \$684,500, another \$151,000 came from the Alaska Fund, and the Territorial legislature contributed a miserly \$127,338. There was an allotment of \$500,000 for the construction of the Glenn Highway, and another \$2,200,000 for the strengthening of bridges and the widening and re-alignment of the Richardson Highway. War Department endorsement opened Congressional purse strings, the Alaska Road Commission discovered.⁵

Military Projects

Obviously, the military buildup stimulated the construction industry, revitalized the Commission, and brought to fruition long cherished plans for roads. For example, the Navy and Army sponsored massive defense construction projects on Kodiak Island and surrounding smaller islands. The Army and Navy requested that the War Department endorse construction of 70 miles of access roads at an estimated cost of \$2,735,500, to be built by the Public Roads Administration. These projects included a patrol road around Nyman Peninsula from the permanent dock to the Buskin River; a road from the north boundary of the Naval Reservation through Kodiak to Spruce Cape; an access road from

the Naval Station to Broad Point, and one from Broad Point road to Cape Chiniak; an access road from Kalsin Bay to Portage Bay, and another from Buskin Lake to Sharaton Bay. The Public Roads Administration also was to build a road from Anchorage to Potter - Gull Rock - Hope, connecting with the existing Hope - Sunrise - Seward road, another from Anchorage to Portage - Whittier, and three roads connecting towns with their airports, namely Juneau, Cordova, and Naknek. Alaska finally was on its way in acquiring an integrated transportation network.⁶

Japanese Attack Pearl Harbor

Military expenditures lured thousands of construction workers to Alaska, but to most northerners war seemed far off. That changed suddenly when the Japanese attacked the American Naval base at Pearl Harbor on the Hawaiian Island of Oahu on December 7, 1941. The next day the United States was at War. At the end of January, 1942, Assistant Secretary of State, A. A. Berle, Jr. addressed the question of a highway to Alaska. He believed that Canada would agree to the construction of such a highway, provided the United States undertook the job. He pointed out that the Canadians would probably prefer to have the road run from Vancouver to Prince George, British Columbia, and from there to Dawson in the Yukon Territory and thence to Fairbanks. Berle recommended, however, that the State Department favored a route from Edmonton, Alberta, to Ft. St. John, British Columbia, to Watson Lake and Whitehorse in the Yukon Territory and from there to Fairbanks. Incidentally, that was the route the War Department preferred as well. On February 13, 1942, Brigadier General L. T. Gerow, the Assistant Chief of Staff, informed Berle that the Permanent Joint Board on Defense, United States and Canada was making preparations for the construction of a highway along a chain of airfields built close to the following route: Fort St. John - Fort Nelson - Watson Lake - Atlin - Whitehorse - Kluane - Big Delta - Fairbanks.⁷

A Highway to the North

Serious discussions about such a highway leading to the North had begun as early as 1929. Foremost among its proponents was Donald MacDonald, a locating engineer for the Alaska Road Commission. In that same year interested individuals established the International Highway Association with branches in Fairbanks, Dawson City, Yukon Territory, Vancouver, British Columbia and Seattle. Soon many associations, such as Chambers of Commerce, auto and mining clubs, the American Automobile Association and the U.S. Chamber of Commerce, among others, supported the IHA plan. In 1930, Congress established a Commission to cooperate with Canadian representatives in determining the feasibility of such a highway. In its 1933 report the Commission found the project to be entirely feasible and recommended that it be built. MacDonald, in fact, already had made a reconnaissance of part of the route between McCarty and the Canadian border.⁸

The Alaska International Highway Commission

Alaska's Delegate Dimond subsequently introduced a measure for such a highway, but nothing came of it. In 1938 Congress created the Alaska International Highway Commission to make another study. Donald MacDonald was a member of this Alaska International Highway Commission, together with Congressman Warren G. Magnuson (D., Washington), James W. Carly, a Seattle consulting engineer, Thomas Riggs, former Governor of Alaska, and Dr. Ernest H. Gruening, the Director of the Division of Territories and Island Possessions of the Department of the Interior. The Commission, together with its Canadian counterpart, recommended the construction of such a highway, although opinions as to routing differed. As late as August 1940 the Secretary of War told a Congressional Committee that such a highway had no military value. In November 1940 the Permanent Joint Board on Defense, United States and Canada, considered the highway question at a meeting in Vancouver, but decided not to make any recommendation on the subject. It concluded, however,

that the military value of such a road would be negligible. In the fall of 1941, the War Department altered its view somewhat in view of the uncertainty as to who would ultimately control Siberia, the Soviet Union or Nazi Germany, and the construction of numerous Army airfields in Alaska. The War Department stated that such a highway would have some strategic value but it did not recommend that it be given high construction priority.⁹

Navy Asserts It Can Protect Alaska

On February 5, 1942 the Navy informed Chief of Staff George C. Marshall that the Navy "can afford protection to the sea communications between the West Coast and Alaska adequate to ensure the maintenance there of all Army garrisons and the civilian population." Admiral Ernest J. "Ernie" King, the Navy Chief of Staff and Commander in Chief of U.S. Navy Operations told Marshall that he thought it improbable "that the enemy can obtain a foothold in Alaska from which he could render our sea communications dangerous." King, therefore, disagreed with the thesis that a road to Alaska was necessary because the Navy "cannot afford adequate protection to the shipping destined for that region." Obviously, the American representatives on the Permanent Joint Board on Defense, United States and Canada could not be allowed to express different opinions because that would raise doubts as to the military necessity for the highway. The Navy soon fell into line. Soon thereafter the Alaska International Highway Commission and its Canadian counterpart protested the selection of the route linking the airfields, only to be told that military expediency directed the location of the route. In fact, troops already were on their way North, and Secretary Stimson assured the critics that the Army would have a pioneer road finished by the end of the 1942 construction season.¹⁰

President Roosevelt on February 11, 1942 had given the green light to proceed and soon the necessary formalities with the Canadian authorities had been satisfactorily concluded. The U.S. Army vanguard

arrived in Dawson Creek, on March 9, 1942, and soon thousands of men, both military and civilian, toiled in the wilderness and completed the pioneer road on November 20, 1942. Officials estimated that the pioneer road had cost \$27,745,000, with \$17,548,000 being the Army portion, and the balance funds from the Public Road Administration. By June 30, 1945, the Public Roads Administration had spent a total of \$123,093,443 for the 1,477.5 mile long ALCAN Highway, at an average cost of \$83,311.97 per mile.¹¹

The Alaska Highway

The Alaska Highway, as the road came to be called, joined the Richardson Highway at Big Delta. A branch of the Alaska Highway extended 135 miles from a point near the junction of the Tok and Tanana Rivers to Gulkana on the north - and - south section of the Richardson Highway which provided coastal connections with Valdez and with Anchorage via the Glenn Highway. Alaska certainly was in the news. One contemporary journalist, Richard L. Neuberger then serving in the Army, reported early in 1942 that the Territory had not been so conspicuous and prominent in the American press since its purchase in 1867. He anticipated that the war would speed Alaskan development and progress significantly. A rash of articles appeared extolling the strategic importance of Alaska in the defense of the western shores of the United States, and Ernest K. Lindley of Newsweek reminded his readers early in 1942 that General "Billy" Mitchell in the mid-1930s had emphatically stated that Alaska was the most important strategic spot on the globe in the age of air power. Nobody had listened at that time. Americans were shocked when enemy forces invaded and occupied Attu and Kiska on the Aleutian Chain in the summer of 1942. America's pride was hurt, and citizens were united in their determination to drive the enemy from American soil. Thousands of troops poured into Alaska to participate in its defense and prepare for the recapture of the two islands.¹²

The 1943 Season

The year 1942 had been an eventful one in Alaska. For the 1943 working season, Congress appropriated \$999,900, to the Commission, another \$125,000 came from the Alaska Fund, while the Territorial contribution declined \$21,035 from 1942 to a mere \$106,301. Congress allotted another \$500,000 for the completion of the Glenn Highway which the Commission completed and opened for traffic on November 5, 1943. Much work remained on this road for final completion, but at least it was passable - and the Commission kept it open throughout the winter. The Commission also accomplished much work on the straightening, upgrading and bridge re-construction on the Richardson Highway. It also built a new steel bridge across the Tanana River near Big Delta consisting of two 300 foot spans. This new bridge replaced the ferry, and the Commission also constructed heavy duty bridges at Bear and Sheep Creeks, Tsaina River, and Steward Creek. All of this work was connected with the defense effort. The regular work of the Commission had to continue, and in 1943 it reported maintenance of 2158 miles of road, 139 miles of tramway, 304 miles of sled road, 500 miles of permanent trail, and 224 miles of temporary flagged trail.¹³

Problems in Homer

Alaskans continued to petition the Commission for assistance. Rainhardt Brecht of Homer, a homesteader attempting to make a living farming, recently had signed a contract with the Army to supply Fort Richardson with 425 tons of produce during the 1943 season. His homestead was located six miles out of town, and there was no road. Brecht realized that because of the demands of war, the Commission was "practically powerless to help us. Nevertheless, I wish to state my request for a road which I feel should go through as it is a direct aid in this war." Brecht assured the Commission that the road would be easy to build, with only a few minor side cuts and no fills. In addition, the road would serve twenty-four homesteads, comprising more than half the en-

tire cultivated land of Homer. Brecht, for example, farmed sixty acres of potatoes, forty acres of carrots and fifteen acres of rutabagas, while his nearest neighbor cultivated thirty acres. The road alone was not enough, however, because Brecht had to transport his produce to the dock on the Homer Spit for shipment to Anchorage. Unfortunately, the Homer Spit road had washed out last fall, but in a show of self-reliance Homer citizens had practically rebuilt the road, and also constructed a dock. Obviously, this demonstrated that the residents of Homer were serious about farming.¹⁴

Complaint That Commission Not Helpful

Brecht complained to Governor Gruening that the Commission rendered no help. First he had been told that there was not enough equipment in Homer to do the job. That was not true, since there was an Allis Chalmer D7, two graders, and several trucks in town. Superintendent M. C. Edmunds then told Brecht that the Commission did not have the manpower to run the equipment. Brecht pointed out that the homesteaders, all qualified to operate the machinery, would gladly donate their time if they could use this equipment to build the road. Finally, Edmunds stated that the Commission just did not have enough money for such a project. Brecht was clearly frustrated, because he felt that Edmunds was just "beating around the bush." In the meantime, the equipment sat idle for six months of the year, and during the remainder Commission personnel operated it only eight hours a day. "What about the other sixteen hours?" Brecht asked. "Cannot this machinery be put to work two shifts?" Brecht concluded by stating that "I said my say, as I had a right to, and I sincerely wish you [Governor Gruening] would look into this matter."¹⁴

Agricultural Roads Near Homer

Superintendent Edmunds heard about the complaint from Chief

Engineer Taylor. He stated that it would be easy to construct a graded road to the Brett homestead, "but to build a road over which he could haul over 400 tons of vegetables to market during a wet fall would require much additional surfacing" on the new road and also on the old road to which it would connect. In Edmunds' estimation, Brett, a young man in his mid-twenties, belonged to a group of individuals who had located at Homer during the last ten years, and "some of them have big ideas, they feel they can set the world on fire and show oldtimers how to do things on a large scale. Edmunds, presumably, was one of these sourdoughs, and he visibly resented the cheechakos. Usually, however, "these people last a year or so," he observed, and then, "after having made a failure of their original plans, they leave the country and are not heard of again." Brett should not be "bragging about his farming exploits," Edmunds advised, because while it was true that he had plowed some land last summer, "a large part of his crop which he hauled to the Spit had to be thrown into the sea on account of freezing."¹⁵

Edmunds Responds to Criticism

Edmunds refuted the assertion that there were a large number of competent dozer and truck drivers at Homer. In fact, he had been unable to recruit even one man for a road project at Red Mountain. Brett himself was "not much of an operator," Edmunds observed, for last winter he had been unable to start a tractor although he had tinkered with it for months. It took a Commission mechanic half an hour to get the machine going. No doubt, the superintendent was annoyed at Brett's complaints, and doubted the man's competency as a farmer. Rather than spending money on building a road to his homestead, however, Edmunds insisted the limited funds be used to maintain the road connection some four and one half miles to the dock at the end of the Homer Spit. It was a necessary chore because area residents needed the dock and the road. The problem was that high tides washed over the Spit depositing timbers and rubbish, and particularly washing out the road where it joined the mainland at Mud Bay. Ideally, the Commission should build

a pile bridge across the spit which would withstand high tides and storms and solve the wash-out problems at Mud Bay. Funds had never been available to do that, so the Commission had muddled along by building timber and brush dykes which frequently had to be repaired.¹⁶

Roads to be Built

Nevertheless, the Commission started to construct a road to Bredt's homestead located on the high bench at Homer. When harvest time came, however, Bredt's crop was a failure and he had nothing to haul over the Commission-built road which, incidentally, also served other homesteaders. Bredt and his brother then left Homer and gave up their homesteads. The Commission had not finished the road clear to his homestead after his 1943 crop failure.¹⁷

Citizens of Homer Still Dissatisfied

Numerous protests about road conditions during the winter months in the Homer area continued and came to Taylor's attention. Mrs. R. W. Edens was dissatisfied that the Commission was unable to keep the Homer Heights road plowed during the winter. Residents needed the road to get to town, and so did the school bus. Patsy Myhill and Margaret M. Richardson had attempted to talk with Taylor about the lack of snow removal on a visit by the Chief Engineer to the area. Unfortunately, Taylor had only been able to spare a few minutes with the two women, and the talk had infuriated both. They left the brief meeting with the feeling "that to expect any help from you" had been just wishful thinking. Taylor's opinion that it required a rotary snowblower, costing approximately \$14,000 to keep the roads open was plainly erroneous. All he needed to do was to hire a competent dozer operator. Carl Sholin, the Commission road boss in Homer, knew little about operating a dozer. Consequently, "the hill folks were isolated for the rest of the winter. It is unfair to a community to make 60 people suffer "because one man was inexperienced. Every winter since 1939-1940 the snow

had been removed satisfactorily by experienced dozer operators - except the last season. The Homer area finally attracted families, both women claimed, they would not stay "unless we have hopes for a solution to the problem of roads." The whole community keenly felt the loss of a single family, and within the past year six families had moved out because of inadequate transportation facilities. "Alaska homestead life," they stated, "has enough hardships connected with it without adding the unnecessary hardship that isolation brings." Residents needed roads to get children to school, obtain medical aid, conduct business, receive mail, attend church, and maintain social contacts. Perhaps men smiled at the term "social contact," but even the Army had recognized that need, and "in Anchorage, social life is so important that roads are kept open to the roadhouses." Both women demanded that Taylor consider the community's "needs fairly and give our problems unbiased consideration. None of us feel that this has been done up to this time." For that reason, the little community of Homer Heights had banded together in a united effort to obtain results.¹⁸

Chief Engineer Taylor Sympathetic

Taylor was sympathetic and diplomatic. Complaints such as these were not new to him. Residents from all sections of Alaska always asked, in fact demanded as a right, many more projects and services than the Commission's slender resources could supply. He told the residents that while some snow removal had been performed in the past on some roads, it was impossible to assure "that your roads will be kept open continuously during the winter...." The Commission had never been able to provide continuous winter maintenance on all of its roads. "In fact," he stated, "such maintenance has been limited to heavily traveled roads in thickly settled areas around large towns." He promised, however, to do all humanly possible to satisfy the requests with the funds and equipment available.¹⁹

Sholin To Be Replaced

Taylor discussed the situation with Superintendent Edmunds, and advised him to replace Carl Sholin as dozer operator because a "unanimity of opinion" regarded his skills as insufficient. In reality, however, these people desired additional Commission resources channeled into Homer, and there just were not any, and that was not Sholin's fault. Edmunds thereupon arranged to have the dozer work double shift to get the roads plowed out as soon as possible after a storm. He also agreed to replace Sholin with a thoroughly competent operator. Edmunds then hired Robert W. Kranich, the school bus contractor, to keep the roads open. So far, so well.²⁰

Private Contractor Only Partly Successful

In February 1944, Kranich reported troubles. He had been unable to keep the road open during all of January because the whole month "was one continuous snowstorm with plenty of wind thrown in. The hill roads drifted level full with three to five feet of snow and a large part of our road work to the dock completely washed away." School bus service had to be discontinued temporarily, and even the school closed during the last week of the month because "the storms were so severe that it was impossible to go even on foot." Edmunds felt vindicated, for the critics had claimed that "it was comparatively simple for some competent man to keep the roads open for traffic." Kranich was such a man, the community had agreed. Now it seemed that the Commission's contention that it would be very difficult and expensive to do this work was justified. Edmunds noted that no further complaints had been received. Apparently, the residents of Homer Heights realized how difficult the work really was. "It is very easy to criticize and find fault with government agencies," he concluded, but more often than not "government men are not really at fault as we cannot do impossible things.... especially when funds and equipment are limited."²¹ Taylor had handled the criticism well. He had cooperated with resident wishes

and engaged a competent man to keep the roads open. A severe winter had shown the residents that human determination and skills were no match for nature's forces.

Seward Chamber Petitions

In the meantime, the Seward Chamber of Commerce petitioned the Commission to build a road from Homer to Cooper's Landing. This was not a new idea, for as early as 1938, Kenai Peninsula residents had appealed to the Commission to at least survey a future highway from the Seward-Kenai road, ending at Russian River, down through the best agricultural areas and terminate at Homer. Locating and marking such a route would encourage settlers to follow it and homestead adjoining lands, thus transforming the whole route "into a beehive of activity. The people would start making their home knowing that by the time they were ready for business the highway would no doubt be well under construction." Don Carlos Brownell, the mayor of Seward, had strongly supported the petition. Brownell was an Alaska booster, and as such exaggerated conditions. He claimed "that there are hundreds of people intending to locate farms on the Peninsula,"... and "all the towns, especially Seward, are receiving increasing demands for information as to advisability of coming now." The reply always was to wait until the land had become more accessible through roads. Despite these warnings, however, "families are coming in by the dozen," some locating in Homer as well as the various other Kenai Peninsula towns "there to wait until a survey of a road will enable them to locate on land eventually connected by roads to markets." Brownell reminded the Commission that Kenai Peninsula residents had sent a petition with many signatures to Juneau, asking for the immediate start of construction of such a road. This time, however, fearing that the request would not be granted at once, they only asked that a permanent survey be started immediately. Nothing had come of it. In receipt of the 1944 petition, Taylor told the citizens that "our experience in obtaining appropriations for road work during the past two years has been

that neither the Bureau of the Budget nor the Congress is willing to approve funds for road work in Alaska except that directly connected with Army activities in the Territory." He assured the petitioners, however, that the Commission had included the road project in its postwar construction program. In June 1945, Hawley Sterling, the Assistant Chief Engineer, finally made a reconnaissance of the proposed road from Kenai Lake to Homer. Sterling estimated that a total of approximately 108 miles of main road would have to be built, with another 22 miles of branch roads. If approved and funded, Sterling believed that the road could be built rapidly because work could start simultaneously from a dozen points, if necessary. Power barges could land heavy equipment at any point along the Cook Inlet, and though this would necessitate the construction of spur roads, these would be required in any event for gravel hauling. In 1946, the Commission finally put three survey parties to work on the Kenai Peninsula.²²

Commission Moves Property

In the meantime, following the abandonment of the Copper River and Northwestern Railway, and the construction of the Glenn Highway, the Alaska Road Commission moved its shops and warehouses from Chitina to a point on the Glenn Highway near its junction with the Richardson Highway. Since electricity was unavailable, the Commission built its own electrical plant on a site set aside by executive order and informally given the name Glennallen. Following the Commission move from Chitina, a number of employees built residences in the vicinity. By the end of 1943, they desired to obtain electricity for home use from the Commission plant. The Commission supported these requests, not only to improve living conditions of the employees but also to avoid fire hazards that had to be expected where the employees used gasoline or coal oil for lighting. In December 1943, Secretary Ickes granted the request to have Commission employees at Glennallen hooked up to the electrical plant. They were to be charged at the rate of ten cents per kilowatt hour, with a minimum charge of one dollar per

month for each meter. The fees were to be deducted quarterly from employee paychecks.²³ Although a minor matter, the administrators of the Alaska Road Commission were very careful in obtaining permission from the Secretary of the Interior before furnishing the service requested. They well remembered the trouble the maintenance and use of the telephone lines along the Richardson Highway had caused a few years earlier. There was to be no repetition of such a situation.

Plans For Postwar Projects

By late 1943, the Alaska Road Commission had prepared a list of projects for a postwar construction program. It had selected those which would be most heavily used immediately after completion rather than offering a complete list of all projects the Commission and others had recommended from time to time during the last twenty years. The Commission believed that homesteaders would expand the farming area, and that many tourists would visit Alaska to satisfy curiosities awakened by the wide publicity the North had received during the war. The Commission, furthermore, was convinced that any postwar road program for Alaska would be of military interest. The Second World War conclusively had shown Alaska's strategic military importance. The Commission also pointed out that former estimates for the same projects had been far too low in light of recent experiences which had shown that a road, 24 foot in width, would cost between \$20,000 to \$25,000 per mile to construct. The total cost for the fourteen projects came to \$16,070,000, most to be completed by the third year and the remainder by the sixth year. The fourteen projects and their price tab follow:

Kenai Lake to Homer,	\$2,500,000;
Skagway to Dyea,	\$ 200,000;
Farm Roads Wasilla area,	\$1,200,000;
Iliamna Lake to Lake Clark,	\$ 150,000;
Cantwell to Valdez Creek,	\$1,000,000;
Valdez Creek to Richardson Highway	\$2,000,000;

Cantwell to McKinley Park Station,	\$ 600,000;
Farm Roads Homer Area,	\$1,000,000;
Farm Roads, Fairbanks Area,	\$ 800,000;
Fairbanks to Chena Hot Springs,	\$1,620,000;
Mine Roads Seward Peninsula,	\$1,000,000;
Eagle to Forty Mile to Tanacross,	\$2,300,000;
Chitina to McCarthy,	\$2,200,000;
Leila Lake to Richardson Highway via McLaren River	\$2,500,000. ²⁴

A Modest Program

It was a modest program, and only time would reveal whether or not Congress would appropriate the necessary monies. For the last year of the war, 1945, Congress appropriated \$2,250,000 to the Commission, another \$152,500 came from the Alaska Fund, while the Territory contributed a mere \$31,892. The years 1941 to 1945 can perhaps be best summarized by stating that the Alaska Road Commission used its entire Congressional appropriation to maintain the central Territorial highway system. In the 1944, work season, the funds had been insufficient for even the barest maintenance because of the very heavy military traffic on the Richardson, Glenn, and Steese Highways. In fact, the Commission had been forced to request a deficiency appropriation only. The Commission had used the modest, and unfortunately declining Territorial appropriations for maintaining roads in the outlying districts, which for the most part, served mining communities. All of these secondary roads were in poor condition at the end of the war. In fact, some had deteriorated so badly that they required complete reconstruction. G. H. Skinner, the Chief Clerk of the Alaska Road Commission, put the situation best when he stated that maintenance and rehabilitation on the secondary road system could not begin until the Commission either received "large appropriations or traffic on the central system falls off sufficiently to enable us to divert funds now employed on the maintenance of those roads."²⁵ At that point, nobody could predict what the postwar years would bring.

FOOTNOTES

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3. Alaska Road Commission, Annual Report, 1940, pp. 1, 6-7.
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7. A. A. Berle, Jr., Memorandum "Alaska Highway," January 31, 1942, J. D. Hickerson to Berle, Confidential Memorandum, "Alaska Highway," January 31, 1942, R.G. 407, Records of the Adjutant General's Office, 611 Alaska 1-1-45, N.A.
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11. Woodman, "Building the Alaska Highway," pp. 17-25; Theodore A. Huntley and R. E. Royall, Construction of the Alaska Highway (Washington, D.C.: Government Printing Office, 1945), p. 96, P - 2985.
12. Naske, An Interpretative History, pp. 57-58.
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14. Bredt to Gruening, April 13, 1943, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
15. Edmunds to Taylor, May 8, 1943, R.G. 30, Alaska Road Commission box 65479, Federal Records Center, Seattle, Washington.
16. Ibid.
17. Edmonds to Taylor, August 28, 1947, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
18. Elden to Taylor, June 28, 1943, Myhill to Taylor, June 28, 1943, Richardson to Taylor, June 30, 1943, Elliott to Taylor, June 28, 1943, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
19. Taylor to Zettle, July 5, 1943, Taylor to Richardson, July 7, 1943, Taylor to Myhill, July 10, 1943, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
20. Edmunds to Taylor, September 17, 1943, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
21. Kranich to Edmunds, February 6, 1944, Edmunds to Sterling, February 12, 1944, R.G. 30, Alaska Road Commission, box 65479, Federal Records Center, Seattle, Washington.
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CHAPTER SIXTEEN

THE FUROR OVER HOUSE REPORT NO. 1705

On July 3, 1945, Congress passed House Resolution 255, directing a subcommittee of the Committee on Roads to inspect the Alaska Highway and its feeder roads, to determine why the highway was constructed, its cost, the manner in which federal funds were expended on the project and its collateral facilities, and to also determine the present and future value of the highway to the United States and Alaska. In conformance with the House Resolution, the subcommittee consisted of Representatives J. W. Robinson (Utah), chairman; W. M. Whittington (Mississippi); Jennings Randolph (West Virginia); Hugh Peterson (Georgia); Jesse P. Wolcott (Michigan); Paul Cunningham (Iowa); and J. Glenn Beal (Maryland). All members of the subcommittee, except Representatives Whittington and Wolcott, spent the greater part of August 1945 in Canada and Alaska, making an on-the-ground inspection of the Alaska Highway, its feeder roads, and the collateral facilities constructed under military supervision to serve the highway and to be served by it.¹

Subcommittee Members Travel in Alaska

Subcommittee members traveled by automobile over the entire Alaska Highway except the 98 mile section between Whitehorse, Yukon Territory, and the junction of the Alaska Highway with the Haines lateral highway. Subcommittee members inspected this route from the air at low altitude. In addition to covering the 1,479 miles of the Alaska Highway, the members also drove over 575 miles of the connecting road system in Alaska. At each stop, the Representatives inspected highway maintenance and service facilities as well as the many airports along the way. They collected information on the problems of supplying the air route, the nature and condition of the telephone and telegraph system paralleling the highway; and the pipeline distribution system supplying airports between Watson Lake, British Columbia, and Fairbanks with aviation and motor gasoline and diesel and fuel oil. They also sponsored meetings in various cities and

settlements in Canada and Alaska where they listened to comments and discussed highway problems. Subcommittee members also obtained information on the agreement between the United States and Canada on the construction and maintenance of the highway, and collected and analyzed cost data on the construction of the Alaska Highway. In numerous appendixes, the subcommittee members pulled together all of the relevant historical data on the origins and construction of the Alaska Highway, much of it called from War Department and Public Road Administration files. It was a truly comprehensive undertaking.²

Subcommittee Members Learn About Alaska Highway

Subcommittee members learned that, under the provision of the original exchange of notes between the United States and Canada, those portions of the Alaska Highway and the Haines lateral road located in Canada would become integral parts of the Canadian highway system on April 1, 1946. On that date, Canada agreed to assume maintenance of these roads within its boundaries. The portion of the Alaska Highway located within the Territory already had become an integral part of the Alaska road system. The subcommittee members learned that these highways were to be opened for civilian use during the summer of 1946. The subcommittee members then turned their attention to the maintenance of both highways located in Alaska. Subcommittee members observed that "it would be incorrect to say that the committee was impressed favorably with the manner in which the Alaska Road Commission handles its assignment for maintenance and new construction." After carefully surveying work performed by the Commission in maintaining, repairing, and undertaking new construction on the Richardson Highway between Valdez and Gulkana, "especially in the vicinity of Keystone Canyon, left the Committee with the impression that the government is not receiving adequate value for funds appropriated by the Congress for work to be done under the supervision of the Alaska Road Commission ." Committee members particularly criticized the "inadequate engineering knowledge...exhibited by officials of

the Alaska Road Commission in constructing a new section of the Richardson Highway along the floor of Keystone Canyon." Commission engineers had "overlooked the simple engineering fact that rock cut out of the canyon wall and dumped into the adjoining river bed would block the channel and raise the water level in the canyon higher than its previous level." At the first high water, the road was under water.³

Alaska Road Commission Criticized

Committee members found evidences of "inefficiency and employment on a political rather than a businesslike basis..."For this reason, the committee members recommended that Alaska be included in the provisions on the Federal-Aid Highway Act (P.L.521) to cover road building operations. Since most of the Territory's land surface was a part of the public domain, however, Congress should make an exception so that the Territory not be assessed more for its share of the cost of these improvements than it can equitably bear. Futhermore, the responsibility for road construction should be transferred to the Public Road Administration with its proven management record so that the federal government would receive more value from its highway investments in the future.⁴

Donald MacDonald Objects to Criticism

Donald MacDonald, a former locating engineer for the Commission and an ardent advocate of a highway to Alaska, immediately took exception to the criticism leveled at the Commission. He briefly summarized the history of the Commission and the history of the Alaskan labors of the Public Roads Administration in Alaska. The former agency employed a day labor system, the result of trial and error. The Commission had adopted the system because the contractor method required imported labor, heavy equipment, and supervision. All of this would have to be imported at a high cost. In addition, the contractor system required an elaborate engineering staff for the measurement and cost estimation of every step in the construction process. This necessitated a big overhead expense,

all out of proportion to the jobs performed. The Commission, with very limited funding, very early decided to build the many miles of light pioneer roads required by the residents. To build heavy duty roads, as the Public Roads Administration had done in Alaska's National Forests, would have been unsound engineering for the Commission. The Alaska Road Commission had always attempted to build the maximum mileage with every available dollar, and eliminate every possible dollar of management and engineering overhead. As a result, the district superintendents had to be engineers, as far as possible, because they had to perform whatever engineering was required. The Commission only used locating engineers, topographers, draftsmen, chairmen, calculators and rodmen on long jobs of road location. In short, MacDonald stated, a Commission engineer was "a man who could do with one dollar what any bungler could do with ten."⁵

In contrast, MacDonald pointed out, the Public Roads Administration of the Department of Agriculture was one of "the most powerful organizations in Washington," and supervised the expenditure of greater sums than any other agency with the exception of the War and Navy Departments. It directed the expenditure of huge sums of money for road construction in all the States and Hawaii under the provisions of Federal-Aid Highway Act. As a result, it had built great engineering and administrative offices in Washington and throughout the States. This staffing was necessary and commensurate with its responsibilities. MacDonald argued that such a sophisticated organization was totally unsuited for the construction of the lightly-gravelled pioneer roads through Alaska's vast wilderness.⁶

Jessen's Weekly Defends Alaska Road Commission

MacDonald was not the only one to defend the Commission. The editor of Jessen's Weekly of Fairbanks remarked that "when a Congressional Committee assigned to an 'investigation' of the reputed extravagance and waste on the Alcan Highway comes north chaperoned by the very big shots, the head of the P.R.A. and the Colonel-in-charge of that construction, whitewash the Alcan and then step clear out of its way to slap down the

defenseless little Alaska Road Commission with an utterly unwarranted baseless calumny it's time resident Alaskans oiled the old gun and started looking for smelly varmints." The editor disputed the committee's assertion that it had carefully surveyed the Commission's work on the Richardson Highway. That was impossible, because the work was scattered along the whole length of the highway's 370 miles. In fact, the members of the subcommittee had not requested any facts and figures on the yardage of dirt moved, length and number of the many wooden bridges replaced by steel ones, labor costs, and weather conditions, among others. Furthermore, why did the Committee ignore the Glenn Highway constructed by the Commission, the editor asked? The total cost of the project, including two year's maintenance, came to \$19,484 per mile. Knowledgable engineers claimed that the Commission built the highway through more difficult terrain than the Alcan Highway in Alaska, yet its cost amounted to just one-fifth as much per mile.⁷

Editor Points to Long Alaskan Experience

The editor also refuted the committee's statement that "there was no precedent in road construction in a remote and virtually unexplored wilderness." That just was not true, for the Alaska Road Commission had accumulated over forty year's of experience, and constructed thousands of miles of roads and trails in Alaska's wilderness, "an incomparable record of achievement." Strangely, however, "neither the Army nor the P.R.A. in their infallibility ever consulted this demonstrable rich source of information. They knew it all from birth." Some members of Congress now wished to transfer all Alaska road work to the Public Road Administration in Washington, the editor complained, resulting in the complete loss of local control. In conclusion, the "little A.R.C. is involved in the ambitions of a great Bureau seeking instinctively to extend its powers."

Judge Dimond Protests

Federal District Court Judge Dimond protested to the chairman of the Committee, Congressman J. W. Robinson, that more than forty years residency in the Territory had given him ample opportunity to become familiar with the work of the Alaska Road Commission. In his judgment, shared by 95 percent of his fellow citizens, "the Alaska Road Commission has been, and is, one of the most efficient and competent of all government agencies." It had given the North better roads for the little money it had to work with "than anyone had a right to expect." Naturally, these roads were not of the "highest type, but they are eminently suited to the primitive conditions existing in Alaska" where the prime need still was for pioneer roads. Judge Dimond stated that "I grieve over the injustice" done by the Commission's report "to the honorable, hard-working and intelligent men who, in the past, have served, as well as those who are at present serving in the Alaska Road Commission."⁹

Delegate Bartlett Jumps Into the Fray

Alaska's Delegate E. L. "Bob" Bartlett likewise defended the Commission. He complained that, although a member of the Committee on Roads, he had not been given an opportunity to examine the report before its publication. Bartlett resented the "highly derogatory" comments in the report pertaining to the Commission. These statements had been widely publicized in the Territory, he continued, and had "done irreparable harm to a group of men whose loyalty, ability and efficiency are by words in Alaska." These comments were, in fact, without merit. Chairman Robinson quickly assured both men that "our Committee had no thought of doing an injury" to the Alaska Road Commission which had done some good work. Every member of the Committee, however, shared the feeling "that too many engineering mistakes had been made." Robinson stated that any statement made was not intended to criticize but merely call these facts to the attention of the Alaska Road Commission. He concluded that if the reputation of the Commission had been damaged "we will do what we can to rectify it."¹⁰

Division of Territories and Island Possession Critical of House Report

In the meantime, the Division of Territories and Island Possession in the Department of the Interior which supervised the work of the Alaska Road Commission analyzed House Report No. 1705 and found it wanting. In fact, it "definitely" was a "whitewash" of the construction activities of the War Department, and more particularly, of the Public Roads Administration. Despite all of this, it did contain much valuable data related to the construction of the Alaska Highway. Division personnel was disheartened and disillusioned "to see what unfair and unwarranted conclusions can be adopted by a presumably open-minded committee of the Congress." Not a word had been uttered on the excellent job the Commission had done in building the Glenn Highway, a fact the editor of Jessen's Weekly also had pointed out. The Keystone Canyon job criticized so bitterly was only approximately five miles long. Even if mistakes were made, it was "a fly speck compared to expenditures written off on the Alaska Highway job so uncritically. The Committee made no attempt to learn the facts for either the Division or the Commission, "although it is evident throughout the whole report that a sympathetic ear was lent to both the PRA and the War Department for explanations of every conceivable kind which would tend to throw the most favorable light on the Alaska Highway job." The accusation concerning politics within the Commission was groundless. In fact, the Public Roads Administration probably played more politics to get this report out of the subcommittee on Public Roads than had been played in the whole history of the Alaska Road Commission.¹¹

Chief Engineer Taylor took time to refute everyone of the statements made by the Committee, and concluded that the "indictment of the Alaska Road Commission in the report is decidedly unfair as no real investigation of our work was made and available cost records were not examined or requested." Alaska's Governor Ernest Gruening was blunt in his evaluation of the report. He called it thoroughly unfair and unfounded, and further observed that "it arises from nothing more than the desire of Thomas MacDonald [the head of the P.R.A.] to take over road construction in Alaska bag and baggage." Gruening recalled that a group of officials

from the Division of Territories and Island Possessions visited MacDonald late in the fall of 1944 to discuss Alaska's possible inclusion in the Federal-Aid Highway Act and the chance of receiving some federal funds for Territorial road construction. MacDonald, Gruening remarked, expressed his attitude virtually as an ultimatum. In essence he stated that "I can get you some money provided the Public Roads Administration builds all the roads and is put in charge." If not, there would be no funds. The governor did not regard the Commission as perfect, for it had made mistakes, but "there is no evidence that any such were demonstrated to the House Roads Committee." Gruening thought it "a grim jest" that the same report which condemned the Alaska Road Commission accorded unqualified praise to the Army Engineers. "More major bungling, the evidence of which is visible on every hand, was performed by the Army Engineers than was ever seen before in the Territory." The Haines lateral road was an excellent example although there were plenty of others. The Alaska Road Commission had built the first 42 mile stretch extending from Haines to the boundary with British Columbia in the 1920s. It had always been a very satisfactory road. Then the Army Engineers came in and extended the road to link up with the Alaska Highway. They went ahead and "improved" and straightened the Haines road, locating it along the Chilkat and Klehini Rivers. Commission personnel warned that the new location would wash out, "but no one could tell the Army Engineers anything." So the road washed out, not once but four times, and each time they rebuilt it at greater expense on the same location along the river bed. Finally, after more than a mile had been completely washed out, the Army Engineers went back to the Alaska Road Commission location. Gruening knew many other examples of such incompetency, and "while it is not pleasant to bring up the errors of other government agencies," it was mandatory in this instance in order to point out how unfairly the Alaska Road Commission had been treated in the report.¹²

Report Shows Vulnerability of Alaska Road Commission

The fury about the derogatory remarks about the Commission contained in House Report No. 1705 soon subsided. The comments by Committee members

about the performance of the Alaska Road Commission demonstrated the vulnerability of the organization. Alaskans were practically united in their defense of the Commission, but long term loyal and effective service in the Territory did not necessarily impress members of Congress. The whole affair also demonstrated that the Division of Territories and Island Possessions had not represented the Commission adequately in budget hearings before Congress. This was a cumulative failure, going back to the day the Commission was transferred from the War Department to the Department of the Interior in 1932. Between 1932 and 1936, the Department failed to effectively lobby Congress in behalf of the Commission, and when the Division of Territories and Island Possessions became responsible for the Commission in 1936, it also neglected to effectively represent Alaska's transportation needs before the Congress.

Federal-Aid Highway Act for Alaska

Committee members had urged that Alaska be included in the Federal-Aid Highway Act. That was not a unique recommendation for various territorial legislatures had memorialized Congress on the same subject, and Alaska's delegates to Congress from time to time had introduced measures designed to achieve the same purpose - always unsuccessfully. After 1946, Alaskan politicians and administrators realized that sooner or later Congress would include the Territory in the Federal-Aid Highway Act. When that happened, the Alaska Road Commission would cease to exist. This prospect must have made some members of the Commission uneasy.

Division to Render more Help

In the wake of this controversy T.W. Taylor, the Administrative Officer of the Division of Territories and Island Possessions visited Alaska with the purpose of discovering in what fashion the Division could be more help to the Commission. Taylor noted that there seemed to be no general plan for Alaskan development. For example, the exact potential-

ities of the various mining districts were not known. The Valdez Creek Mining District furnished a good example. A pamphlet dealing with the area stated that placer mining had been conducted in this district since the first discovery of gold there in 1903. Considerable placer gold had been produced, and would continue to be produced for many years because many of the creeks had not been thoroughly prospected yet. Miners had also discovered some hard rock properties, but these had as yet produced very little gold. Conditions for substantial gold production were favorable, however, and therefore further prospecting and exploration were well justified. Taylor pointed out that these generalities were inadequate for supporting budget estimates before Congress. The same was true for farmlands. Nobody quite knew how much suitable farm land there was in Alaska. No precise data was available for the Kenai Peninsula where the Commission had a road under construction. There was a need for farmers, because most foodstuffs were imported. In 1945, for example, \$12,000,000 worth of foodstuffs had been imported. Obviously, there was an unutilized market for food products, but nobody knew how large this market was. This potential would not be known until some definite development plan had been worked out. All of this information was necessary to decide where to build roads in Alaska. Taylor acknowledged that roads under construction and those proposed for the future were in areas known to be promising. The lack of specific data, however, made it difficult to "make a real case for such roads" before Congress on the basis of economic value.¹³

Bureau of the Budget Critical of Commission

The Bureau of the Budget had repeatedly told the Alaska Road Commission that its justifications for fund requests had not been specific enough. Chief Engineer Taylor had largely overcome this objection for the fiscal year 1948. He also had requested survey money, which, if granted two years in advance of construction, would enable him to base his estimates on specific projects. Administrative Officer Taylor pointed out, however, that the Chief Engineer simply did not have the staff to

prepare the kind of estimates and specifications which were customary for the Public Roads Administration. The Bureau of the Budget also complained the the Alaska Road Commission always "over-layed maintenance difficulties due to weather." Obviously, the Bureau of the budget had no idea what Alaska's climate was like, and Officer Taylor therefore decided to collect photographs which graphically demonstrated these difficulties.¹⁴

Army Proposes Massive Road Construction

The Division of Territories and Island Possession obviously intended to represent the Alaska Road Commission more adequately before Congress. Before the Division could formulate its plans, however, the Department of the Army intervened. On October 28, 1947, Kenneth C. Royall, the Secretary of the Army, told Secretary of the Interior Julius A. "Cap" Krug that the limited capacity of the Alaska Railroad and the deficiencies of "the road system in mainland Alaska jeopardize the mission of National Defense." The Army considered the support of its bases in the north and the development of new sources of strategic raw materials vital necessities for effective national defense. These two requirements depended on the existence of a road and railroad system "not only adequate for peacetime use but capable of sustaining the increased traffic which an emergency would impose." Royall stated that Alaska had to be defended for its own security as well as to protect the contiguous states against an attack. Any planned operation needed to be put into action rapidly and completely. Therefore, any Alaskan economic development, particularly if it made the Territory selfsufficient, would materially aid the national defense mission. Adequate transportation routes from the contiguous states to Alaska and within the Territory were of utmost importance for the logistics support of the military. Specifically, Royall suggested improvements to all-year, all-weather standards of the main routes, namely the Alaska Highway, the Haines Cutoff, the Richardson and Glenn Highways, the Anchorage-Seward road, and the Tok extension of these main routes north and westward. If extended, these should connect existing

and planned military installations. The Fairbanks area north of the Alaska Range was the most important to be served by an adequate road system, followed closely by Anchorage. Royall pointed out that the dependence on the Alaska Railroad for the transportation of goods and supplies to the armed forces in the Fairbanks area constituted a weak link in Alaska's defensive system which had to be remedied by building adequate roads to Fairbanks, consisting ideally of alternate all-weather roads. In addition, the Army intended to construct a petroleum pipeline to Fairbanks, and it urged the surfacing of the main road system.¹⁵

Within a year, Congress approved a massive six-year road development program for Alaska blessed by the Army. This program was to continue the social and economic revolution wrought by World War II.

Footnotes

1. U.S. Congress, House, 79C., 2S, The Alaska Highway, An Interim Report From The Committee on Roads Pursuant to H. Res. 255, H. Rept. No. 1705 (Washington, D.C.: Government Printing Office, 1946), pp. 1-2.
2. Ibid., p. 2.
3. Ibid., p. 62.
4. Ibid., pp. 62, 71.
5. Jessen's Weekly, December 28, 1945.
6. Ibid.
7. Clipping, no date, Jessen's Weekly, in Anthony J. Dimond Papers, folder Roads, A, box 32, University of Alaska Archives, Fairbanks, Alaska.
8. Ibid.
9. Dimond to Robinson, April 6, 1946, Anthony J. Dimond Papers, folder Roads, A, box 32, University of Alaska Archives, Fairbanks, Alaska.
10. Bartlett to Robinson, April 9, 1946, Robinson to Dimond, April 12, 1946, Anthony J. Dimond Papers, folder Roads, A, box 32, University of Alaska Archives, Fairbanks, Alaska.
11. Flakne to Arnold, April 4, 1946, R.G. 126, Central Classified Files, 9-1-55, N.A.
12. Taylor to Gruening, April 8, 1946, Gruening to Arnold, April 9, 1946, R.G. 126, Central Classified Files, 9-1-55, N.A.
13. Taylor to Arnold, August 26, 1946, R.G. 16, Central Classified Files, 9-1-55, N.A.
14. Ibid.
15. Royall to Krug, October 28, 1947, R.G. 126, Central Classified Files, 9-1-55, N.A.

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CHAPTER SEVENTEEN

POSTWAR REORGANIZATION AND A PROPOSED FERRY SYSTEM

Events in distant places have always determined Alaska's fate. That had been the case when Alaska was Russia's colony, and continued when the United States took Russia's place. The Territory had experienced an economic boom during World War II as thousands of construction workers moved north to build military installations. The armed forces garrisoned Alaska, and by 1943, about 150,000 troops defended the Territory. On May 11, 1943, American and Canadian troops began their amphibious assault on the Aleutian Island Attn. At the end of that month, the island fell into American hands after fierce fighting. Subsequently, on August 15, 1943, an amphibious landing was made on Kiska. The troops, however, discovered that the enemy had evacuated the island at the end of July under the protection of heavy fogs. Following this action, the military command reduced ground forces in Alaska, and by March 1945, only 50,000 troops were left. Forts closed, bases were dismantled, and airfields turned over to the Civil Aeronautics Administration.¹

Many Alaskans regretted the departure of the military, for without the heavy federal expenditures, Alaska's economy threatened a return to its traditional seasonal character, dependent on mining and the fishing industry.

The End of World War II

After the allied defeat of Germany in May 1945, and Japan's surrender a few months later, in August, the nation celebrated the victories. There was much to be thankful for. It had been a costly conflict which had brought suffering and death to millions on both sides. In the early summer of 1945, most Americans admired the gallant Russian allies who had helped defeat the Nazis. In fact, seven out of ten Americans liked the Soviets so well that they endorsed the idea of sending German males to Russia to help rebuild the

cities devastated by war. By the middle of 1946, disillusionment with the Soviet Union had begun. Almost six of ten Americans felt that the Soviet Union's actions in Eastern Europe and elsewhere expressed their desire to rule the entire world, and about one in four was ready to go to war immediately to stop these ambitions. Alvin Richman, a public opinion specialist who had studied American attitudes concluded that the negative trend toward the Soviet Union had been unusually steep from September 1945 to March 1948. He concluded that by early 1948 about 70 percent of the American public viewed the Soviet Union unfavorably.²

Cold War Revives Alaska's Economy

The collapse of good feelings and the start of the Cold War rescued Alaska from the economic doldrums. Not only did it revive Alaska's economy, but military necessity gave Alaska's lagging road construction program a tremendous boost. Increased military preparedness in Alaska, and the building of major military installations throughout the Territory made urgent the interconnection of these bases with paved highways. The Congress of the United States authorized a six-year road program costing in excess of \$125,000,000. Since 1906 the Board of Road Commissioners for Alaska, or later the Alaska Road Commission as it was renamed, had appealed to Congress for funds to provide Alaska with an integrated system, but to little avail. As late as 1941, Congressional appropriations were under \$800,000 annually, and that was a good year, for in 1940 it had been only \$410,541,000. The demands of war led to an appropriation of \$1,892,925 in 1942, and rose to over two million dollars from 1943 to 1946. In 1948, Congress appropriated \$3,936,842 and also approved a massive six-year road construction program for Alaska. In 1949, Congress appropriated \$15,352,935, and in 1950 that climbed to \$23,633,376, and in 1951 rose still higher to \$29,389,476. Between 1905 and 1948, Congress appropriated approximately \$38,696,545 for Alaskan road, trail and bridge construction and maintenance. In contrast, between 1949 and 1955, it appropriated about

\$135,395,031. In other words, in the short span of six years, Congress appropriated more than three times as much as it had in the previous forty-three years.³

Structural Changes for the Commission

There also has been structural changes over the years. As previously stated, the Secretary of the Interior had designated the ex-officio Commissioner for Alaska, namely the governor, to administer the duties relating to the road functions officially transferred to the Department on June 30, 1932. On December 3, 1932, the Secretary issued Departmental Order No. 605 which provided that the Board of Road Commissioners for Alaska officially become the Alaska Road Commission. Actually, that name had already been used since the mid-1920s, but the order legitimized it. Under the order, the Commission form of organization ceased, and primary responsibility for its function was placed with one individual. The chief engineer now became the chief operating official, an arrangement that lasted until July 31, 1948. Together with the vastly increased Congressional road construction program for Alaska, the Department of the Interior reorganized the Alaska Road Commission. On July 19, 1948 the acting Secretary of the Interior issued Departmental Order No. 2448 which created the position of a Commissioner of Roads for Alaska. The order did not change the name of the organization but simply replaced the chief engineer as operating official with a Commissioner of Roads for Alaska. This individual now exercised the authority conferred upon the Secretary of the Interior in the transfer act of June 30, 1932. The Commissioner reported to the Secretary through the Director, Division of Territories and Island Possessions. The chief engineer already had utilized this organizational structure since 1936. Ike P. Taylor retained his position as chief engineer. On January 3, 1949 Commission headquarters in Juneau announced that Angelo F. Ghiglione would take Taylor's place effective February 1, 1950. Ghiglione had a long Alaskan background. He had started work for the old Board in 1929 as an instrument man on harbor work in south-

eastern Alaska. A few years later the Commission promoted him to the position of resident engineer in charge of the Juneau Douglas bridge construction. Ghiglione continued his employment with the Commission as Assistant Superintendent of the Anchorage District until assigned to the main office in Juneau as Assistant Chief Engineer in April 1948. In August of that year he became the Chief of the Construction Division of the Juneau Office. A graduate of the University of Washington with a degree in civil engineering, Ghiglione received a Master of Civil Engineering from the Massachusetts Institute of Technology which he attended on a competitive scholarship. During the Second World War, Ghiglione, as a commander in the U.S. Navy Civil Engineers Corps, served as a contract superintendent for the Thirteenth Naval District, overseeing approximately \$100,000,000 worth of Naval construction in the northwest.⁴

Colonel John R. Noyes Becomes Commissioner

On August 1, 1948 the Secretary of the Interior, Julius A. Krug, chose Colonel John R. Noyes as the Commissioner of Roads for Alaska. Noyes was no stranger to the North. A 1923 graduate of the U.S. Military Academy at West Point, and with a civil engineering degree from Cornell University, Noyes has begun the practice of his profession as a young officer for the old Board of Road Commissioners for Alaska in 1926. Subsequently, he held a position with the U.S. Army Corps of Engineers in Alaska from 1932 to 1934. During World War II Noyes served in Europe, and accepted the new position in 1948 on loan from the U.S. Army.⁵

Alaska Road Commission Expands

Increased appropriations also necessitated a moderate expansion of the headquarters personnel of the Commission in Juneau. The Department of the Interior created four divisions, together with the required staff, designated, respectively. Administrative, Engineering, Contracts, and Construction.⁶

Noyes Assumes His Responsibilities

Colonel Noyes assumed his new responsibilities on August 1, 1948. The prospects for vastly increased funding must have pleased him, particularly since he represented a link with the past. He remembered when the headquarters staff in Juneau consisted of three army officers, a president, engineer officer, and a secretary and disbursing officer, together with a handful of civilian employees. In those days, civilian superintendents located at Anchorage, Fairbanks, Valdez, Chitina, and Nome, and a couple of subdistrict offices performed the field operations. When Noyes started his work in 1926, some of the road work was still performed by hand, although much mechanical equipment had already been acquired. In the 1920s the organization still cut much brush and flagged trails used during the winter by dog teams and horse sleighs. For years, the Alaska Road Commission maintained this extensive trail system, but started to abandon it in the 1930s when air travel had become common. In fact, in its 1947 annual report the Alaska Road Commission listed the following total mileage of all roads:

	<u>Road</u>	<u>Sled Road</u>	<u>Trail</u>	<u>Flagged Trail</u>	<u>Grand Total</u>
June 30, 1946.....	2813.1	1238.4	4110.8	161.0	8323.3
Fiscal year 1947:					
New mileage.....	30.7	-----	-----	-----	30.7
Reclassified, abandoned and transferred.....	<u>-59.0</u>	<u>-11.0</u>	-----	<u>-59.0</u>	<u>-129.0</u>
Total.....(a)	2784.8	1227.4	4110.8	102.0	8225.0
No work of either main- tenance or improvement during fiscal; year 1947:	131.9	1033.4	3958.8	-----	5124.1

(a) Includes 80 miles tram road.⁷

The above figures show that the Commission had practically abandoned its system of sled roads, trails, and flagged trails. The above mileage of roads consisted of the following systems:

Principal Connected Road System

	<u>Miles</u>	
Richardson Highway	368	
Glenn Highway	189	
Steese Highway	162	
Tok Cutoff	136	
Alaska Highway and Branches	<u>210</u>	1065

Local Systems

Nabesna Branch	44	
Feeder Roads, Richardson Highway	72	
McCarthy Tram and Road System	31	
Feeder Roads to Steese Highway	134	
Livengood Road and Branches	87	
Anchorage Local Roads	56	
Fairbanks Local Roads	46	
Palmer System	200	
Nome System	167	
Seward Peninsula Mine Roads	94	
Seward Peninsula Tram Road	80	
Takotna System	71	
Flat System	36	
Manley Hot Springs System	48	
Ruby System	66	
Haines System	65	
Kenai Peninsula System	47	
Feeders to the Alaska Railroad	94	
Eagle System	32	
Iliamna System	26	
Forty Mile Road System	29	
Isolated Roads connecting with river or ocean transportation	104	
Mount McKinley Park Roads	<u>91</u>	<u>1720</u>
Total		2785 ⁸

The Colonel's Alaskan Experience

Colonel Noyes had helped construct the Richardson Highway, the first main route connecting Valdez with Fairbanks. By 1948, there existed a network of main roads besides the Richardson Highway, linking the ice-free ports of Seward and Haines with the cities of Anchorage and Fairbanks as well as with the contiguous states via the ALCAN, the Alaska-Canada Military Highway. Better yet, when Noyes took over, the paving of the principal connected road system began, making travel

speedier, easier, and above all, dustfree. The remaining mileage, consisting of the local systems, served approximately three-fourths of Alaska's land area. Not only did the Commission maintain this mileage, but it also continued to pioneer additional routes, meant to connect developing resource and population regions with other modes of transportation, such as river and ocean navigation and airfields.

Planning for a Ferry System

Soon planners for the massive six-year road construction program maintained that any truly integrated system of highway transportation in the North had to be joined with an appropriate water transportation system for southeastern Alaska. On March 1, 1949, James P. Davis, the director of the Division of Territories and Island Possessions in the Department of the Interior to whom the Alaska Road Commission reported, suggested to Secretary Julius A. Krug that he authorize a feasibility study for a system of car ferries. Davis argued that southeastern Alaska contained one-third of the Territory's population and resources. The region had a difficult geography, composed of many islands separated from each other and from the rest of the Territory by deep fjords and steep mountains. Given this topography, it was impossible to develop an effective highway system. Southeastern Alaska, however, was connected with the outside world by a highway extending from Haines through Canada to Haines Junction where it met the Alcan Highway; by the White Pass Yukon Railway extending inland from Skagway to the Alcan Highway at Whitehorse, Yukon Territory; and finally by a railroad and highway connecting Prince Rupert in Canada's province of British Columbia, just south of southeastern Alaska, with the United States. Davis argued that car ferry service connecting Prince Rupert, Ketchikan, Juneau, Haines and Skagway would connect southeastern Alaska with the various roads and railroads, attract tourists, and most importantly, promote the national defense. David recommended that the Alaska Road Commission hire a competent marine engineer familiar with car ferry operations to make a feasibility study. If the proposal appeared

sound, David intended to ask Congress to fund construction of such a system. Secretary Krug approved the Davis proposal a few days later.⁹

Moyes Searches for a Transportation Expert

Noyes accepted the charge with alacrity, and immediately contacted a number of friends with the request to help him find "the right man to make a feasibility study this summer." For example, he contacted General Robert H. Wylie, the Manager of the Board of State Harbor Commissioners, Port of San Francisco, and asked him to find a suitable transportation expert to conduct the study. Anticipating criticism, Noyes told Wylie that "you may laugh at this if you want, but I would remind you that various highway departments do operate car ferries and, therefore, the idea is not as far-fetched as it sounds. Noyes appeared anxious to hire a consultant from San Francisco rather than the Seattle area, home of the Alaska Steamship Company, which served the Territory. He believed that Seattle experts, with a substantial interest in the Alaska trade, would be unable to render an "independent judgment" on the feasibility of such a system.¹⁰

John T. Danaher to Conduct Study

Within a very short period, Noyes hired John T. Danaher, the Assistant Vice President, Passenger Traffic, American President Lines, of San Francisco, California to undertake the study. Danaher delivered the finished product on June 4, 1949. Danaher pointed out that he had carefully reviewed a preliminary study of this project, published in June, 1944, entitled "Feasibility of Automobile Ferry Service Connecting Southeastern Alaska with the Canadian Highway System at Prince Rupert and with the Alaska Highway via Haines." Susannah Mirick, James C. Rettie, George Sundborg, and Charles McKinley of the North Pacific Planning Project had authorized the study. In addition, Danaher had also consulted a number of articles which had appeared on the subject from time to time.¹¹

Danaher Travels in Southeastern Alaska

Danaher traveled through southeastern Alaska in company with Noyes. His first impression was that a ferry service, extending the Alcan Highway from Haines Cutoff to Haines and thence by ferry via Juneau to Prince Rupert "not only was a practical operation, but would so favorably affect the economy of the area through which the traffic would move that it should receive favorable consideration" and be put into operation at the earliest possible time. Later reflection did not change his mind.¹²

Danaher's Recommendations

Specifically, Danaher recommended the establishment of a daily ferry service between Tee Harbor and Haines, Alaska. This service was to consist of two sections. The first and major operation was to serve the ports of Ketchikan, Wrangell, Petersburg, and Juneau. Two steam turbine ferries capable of a speed of 18.5 knots each would complete a sailing from either Prince Rupert or Juneau every 24 hours. The second operation was to be undertaken by a ferry of the type of the San Leandro, a former San Francisco Bay ferry, with landing slips fore and aft, operating across Lynn Canal, a distance of about 50 miles between Tee Harbor and Haines. This ferry was to operate continuously throughout the 24 hour period, Danaher suggested, for this bay ferry-type vessel might not always be capable of accommodating all the traffic from the Prince Rupert-Juneau ferry on a single trip. Furthermore, continuous operation would assure southbound traffic a connection to Juneau.

Potential Ferry Traffic

Danaher pointed out that the success of any transportation operation, particularly water service, depended upon the available and potential traffic. The consultant was convinced that the potential

was extremely attractive, including both civilian and military travelers and vehicles. Danaher argued that the greatest possible travel would occur within a ninety day tourist season from mid-June to mid-September. He was convinced that the ferries would earn enough revenues during this period to permit a daily service throughout the year without the necessity for a subsidy. In addition, he expected the trucking traffic during the winter months to contribute to the daily operating costs outside of the ninety day tourist season, thus permitting rapid amortization of the cost of the facilities.

Tourism

Danaher predicted that the greatest single source of tourist traffic, approximately 72,000 individuals, would be passengers without automobiles who came to Prince Rupert by railroad and bus. The year-round sustaining traffic would consist of trucks or trailers destined for Anchorage and Fairbanks. He estimated that these would transport 400 to 500 tons of freight daily and occupy 750 linear feet per day per vessel, with an average of a driver and one occupant.

Canadian National Railway Interested in Ferry

Danaher had discovered that the Canadian National Railway was vitally interested in the establishment of this ferry system, because they hoped that it would place their railroad line between Jasper and Prince Rupert on a profitable basis. The Southern Pacific Railway also was intrigued in a daily ferry service at attractive low fares. Officials of the railway hoped that this Alaskan ferry service would help support their new "Cascade Daylight" train which they planned to put into operation between San Francisco and Portland. California had experienced a substantial population increase during the war. Many of these people, the railroad executives pointed out, would find Alaska an attractive destination with a low-cost railroad, bus, package tour arrangement. Danaher also has ascertained the interest of the

Western Canadian Greyhound Lines, Ltd., of Calgary, Alberta in such an Alaskan ferry service. Greyhound operated buses between Vancouver and Prince George over the Cariboo Highway. With daily ferry service from Prince Rupert, the Greyhound executive promised that his line would extend its route into that city in the process producing a substantial number of Canadian tourists bound for the North.

Potential Revenue

Danaher estimated that through trucks from Prince Rupert to Haines, both north and southbound, would generate an annual revenue of \$1,525,182, private automobiles \$1,166,832, while tourists during the ninety day season would produce another \$910,080, for an annual revenue of \$3,602,094 offsetting the cost of the ferry service.

Type of Vessels to be Used

The consultant suggested that the Alaska Road Commission ask Congress for funds to construct two steam turbine propelled vessels, 320 foot in length, with a 57 foot beam, making 18.5 knots per hour and having no more than a 13.5 foot draft in order to navigate the Wrangell Narrows at low water. He urged that the design eliminate passenger staterooms and instead cater to deck passengers who would be provided with modern, reclining seats similar to the streamlined coaches and overseas airlines. Vessels should be able to carry about 850 passengers each. A snack bar concession was to provide the food, and there also might be a liquor bar concession. Danaher estimated that each ferry would cost approximately \$3 million to build.

Ask Army for a Ferry

Danaher proposed that the Alaska Road Commission ask the War Shipping Administration to surplus the San Leandro, under charter to the Army and formerly one of the San Francisco Bay ferries. The San

Leandro was a steel hull, double-ended ferry with turbo-electric drive with a speed of about 12 knots. Danaher pointed out that the ship would need modifications costing about \$200,000 to handle the standard height of a 35 foot trailer.

Estimated Annual Operating Expenses

Danaher estimated the annual operating expenditures of the three ferries at \$1,187,170. Subtracting this expense from the estimated revenue of \$3,602,094 left a net income, to be applied against depreciation, amortization, and surplus of \$2,414,924. The consultant also pointed out that port facilities would have to be constructed, but asserted that these would be fairly inexpensive because most locations already possessed docks, ramps, and piers which, in some instances, needed modifications. In summary, Danaher estimated that Congress would have to appropriate approximately \$8,500,000 to construct the ferries, port and dock facilities. He was convinced that the resulting traffic would greatly stimulate the economics, not only of Alaska, but of British Columbia and the Yukon Territory as well.

The Alaska Steamship Company Critical

The Alaska Steamship Company, the chief carrier in the Alaska trade, quickly criticized the Danaher report. The company had looked at the ferry proposition "based on private development", and concluded that the present volume of traffic "could not begin to support the investment" necessary to launch the ferry system. Furthermore, Danaher's estimate of \$8,500,000 was rather moderate, considering the necessity to construct two ocean-going ferries, buy a third one and rebuild it, and build and adapt seven essential terminals.¹³

F. A. Zeusler, a retired Admiral and spokesman for the Alaska Steamship Company, pointed out that the feasibility of the whole plan

depended on a broad, comprehensive highway development program in Alaska and Canada. This would include year-round maintenance and asphalt surfacing at a minimum to afford the degree of comfort to which American and Canadian automobile tourists had become accustomed.

Share Cost of Ferry System

The Alaska Steamship Company favored such a highway improvement program because it would benefit the North. The company was convinced, however, that "it would be impossible for private enterprise to underwrite" the ferry scheme. In fact, Danaher agreed with this assessment because he specifically recommended that the Army and the Department of the Interior share the cost of the project, to be operated by the Alaska Road Commission. The Alaska Steamship Company, however, was "unalterably opposed to any branch of the United States Government running the ferry system in competition with private enterprise. "Steamship service undertaken by the unsubsidized American entrepreneur to Alaska was already "in critical straits," Zeusler pointed out, and government competition "could have a most disastrous effect." If the federal government insisted on establishing the ferry operation, Zeusler continued, it should do so in cooperation with private enterprise and not in competition with it. Finally, Zeusler came to the core of his company's concern. He concluded that "since the Alaska Steamship Company is the sole American operator offering general service to all of Alaska, we feel that we should be the logical carrier to be considered in such an arrangement." In short, the Alaska Steamship Company wanted to make certain that its nearly monopolistic control of the Alaskan market not only be reaffirmed but also be strengthened.

Noyes Surprised About Criticism

Colonel Noyes perhaps was a bit surprised at the criticism. He told Zeusler that the Commission had approached the whole matter from

the standpoint of the development and use of the highways in connection with the six-year Alaskan road development program Congress had approved. He assured Zeusler that his organization was fully aware of the many difficulties faced in maintaining and keeping open the roads in Alaska and Canada to connect with the car ferries. He reassured Zeusler "that you and I are in substantial agreement as to the desirability of private operation of the car ferries. Above all, Noyes protested that he was "not interested in running them [the ferries] and would do so only if a suitable private operator could not be found."¹⁴

Noyes Warned About Running Ferry System

Noyes had no reply to an old friend from the U.S. Army Corps of Engineers who warned him that such a project might well ruin his reputation as an engineer. "The fascination that the Inside Passage has for some engineering minds is beyond me," this friend asserted. "I hope for your sake anyway that you are not successful in putting it [the ferry project] over." It was not a clean engineering problem that could be accomplished through the application of logic. Instead, the friend seemed to warn Noyes, it was a project burdened with politics, and potentially dangerous for Noyes' reputation.¹⁵

Noyes Ignores Advice

Noyes listened to the advice but did not accept it. Instead, he pressed ahead with the ferry plans. He was pleased when told that the Division of Territories and Island Possessions had been very pleased with Danaher's study. If the Secretary of the Interior approved the plan, the Division intended to include money for the project in the Commission's 1951 budget estimates. Noyes assured the Division that the ferry service would "attract an entirely new type of traffic to Alaska which will supplement, but not seriously compete with the existing traffic." Noyes did not believe that the ferries would pose

a serious threat to the operation of the Alaska Steamship Company nor the scheduled airlines. Commissioner Noyes, however, was concerned about the Coast Guard which insisted that full passenger vessels required lifeboats, stewards' department, and staterooms, among others. These requirements would increase costs substantially. Noyes had told the Coast Guard that the vessels which would allow the elimination of the stewards' department and part of the lifeboat facilities, substituting liferafts for most passengers. So far, however, the Coast Guard had not relented in its opposition to this plan.¹⁶

Secretary of the Interior Approves Ferry Plans

By the late fall of 1949, the Secretary had approved the ferry project and it had been forwarded to the Bureau of the Budget as a part of the estimates of the Department of the Interior for the fiscal year 1951. Noyes, however, had developed some doubts about the proposed project. For example, he had discovered that the approach roads in Canada leading to Prince Rupert and Haines were in poor condition. He had negotiated with the Canadians asking for improvements of these routes, but so far the Canadians had shown a lively interest but promised no "actual performance." Furthermore, recent detailed looks at the blueprints for the two big ferries had revealed that certain technical details needed further study. This was particularly true for the projected use of the ferries to carry railroad cars as well as motor vehicles. This probably necessitated design changes, Noyes stated, and therefore it appeared premature to ask Congress for ferry boat construction funds in fiscal year 1951.¹⁷

No Money For Ferry System

In the end nothing came of the Commission ferry scheme. A private company, the Chilkoot Motorship Lines, Inc., operated a small ferry between Juneau, Haines and Skagway. When it ran into financial troubles, the Territory purchased the vessel and operated it. In the meantime,

late in 1947, entrepreneurs experimented in freighting on large barges towed by tugs from Puget Sound to the railbelt. It proved feasible, and the terminal port could be either Seward or the wartime port of Whittier on Portage Bay on Prince William Sound. Most of the barging operations were shortlived, but eventually Al Chezzi, a Fairbanks resident and teamster, developed a barge and trucking operation under the name of Alaska Freight Lines. Ghezzi had driven freight over the Alcan Highway which the military had made available to civilian traffic after the war. This overland operation proved unprofitable, and gradually Ghezzi worked out a method by which he drove trucks from the Seattle or Tacoma warehouses to the docks of these cities. Once there, he disconnected motor and chassis, and had the truck body containing the freight lifted onto the barge which then was towed to the Alaska terminals of Haines or Valdez, and later, when the highway connecting Seward to Anchorage had been completed, to Seward. At these ports, the truck bodies would be swung onto wheels, hitched to the motive power and driven to Anchorage, Fairbanks, or intermediate points. Not until after statehood, however, did the new state government inaugurate the ferry system Colonel Noyes had dreamed about. Accomplished without federal subsidy it brought a partial solution to one of the hitherto-unsolved transportation problems.

FOOTNOTES

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3. Alaska Road Commission, Annual Report, 1955, pp. 46-47.
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15. Mac to Noyes, June 5, 1949, R.G. 30, Alaska Road Commission, Box 65426, Federal Records Center, Seattle, Washington.
16. Noyes to Gruening, August 11, 1949, R.G. 30, Alaska Road Commission, Box 65426, Federal Records Center, Seattle, Washington.
17. Noyes to Davis, October 14, 1949, R.G. 30, Alaska Road Commission, Box 65426, Federal Records Center, Seattle, Washington.
18. Ernest Gruening, The State of Alaska, (New York: Random House, (1968), pp. 423, 506.

CHAPTER EIGHTEEN

PECULIAR ALASKAN PROBLEMS, THE STRUGGLE FOR PREEMINENCE, AND THE GENERAL ACCOUNTING OFFICE

The winter of 1951-1952 was very cold one in Alaska's interior with temperatures dipping below minus fifty degrees, and staying there for days on end. In mid-January, the Alaska Road Commission announced that all construction activities had ceased for the season and all operations were entirely on a maintenance basis. The Commission warned travelers to make certain that their vehicles were in first class shape, and urged that proper clothing be worn and carried along when traveling. For the motoring public, it announced that the Richardson Highway, Route No. 1, was open from Valdez to Big Timber Junction at Mile 130, and from Big Delta Junction at mile 268 to Fairbanks at mile 365. The highway between Big Timber Junction and Big Delta Junction was closed for the winter, and all Fairbanks traffic from Valdez and Anchorage was directed over the Glenn Highway, Route No. 3, to Tok Junction, the Alaska Highway to Big Delta and thence to Fairbanks. Route No. 2, the Alaska Highway, was open and in good condition from the Canadian border, mile 1221, to Fairbanks. The Taylor Highway from Tetlin to Eagle was closed for the winter, but Route No. 4, the Anchorage-Seward was open, as was Route No. 5, the Sterling Highway, from its junction with the Anchorage-Seward Highway at mile 39 to its terminus at Homer, including the branch road to Kenai. Closed for the winter were Routes Nos. 6 to 9, the Steese and Elliott Highways, the McKinley Park roads, and the Haines Highway.¹

Spring

Northern residents probably more than any other people on earth welcome the spring after a long, cold and dark winter. By February the days are getting noticeably longer, and in March the sun is even warm in interior Alaska. By April spring breakup has arrived, and mud replaces snow. This period was always hazardous for the roads, and the Commission

once again announced that weight and speed limits where necessary. By April contractors were back working on the Richardson Highway out of Valdez, and construction also was underway from mile 120, the Gulkana airfield, to mile 199, Paxson, and again from mile 237 at Rapids to mile 268 at Big Delta. In short, construction activities were in full swing by the end of April

Long Alaskan Experience of Commission

Obviously, in a country with such wide temperature extremes and the existence of so much permafrost extraordinary care had to be taken when building roads. The Alaska Road Commission had accumulated much useful information on construction problems in northern climates from its inception in 1905 to 1952. For example, it had found that paved roads had to be of the flexible mat type. Flexibility was necessary because of the continued surface movement caused by seasonal frost or deformation of the underlying permafrost. Commission engineers had discovered that "asphaltic pavements of either road-mix penetration or hot plant-mix type" were successful. Contractors were paving Alaska's major highways with a 20 foot wide, two inch thick mat of hot plant mix laid over a four-inch crushed-rock base. The latter was primed with a medium curing cutback asphalt, while rapid curing cutback asphalt was used in the plant mix.²

Improve Highways To Standards

The major highways were to be improved to the following standards:

	<u>Through Roads</u>		<u>Feeder Roads</u>		<u>Local Roads</u>	
R/W Width	300'		200'		100'	
Width of Roadbed	28'		24'		20'	
Width of Paving	20'		none		none	
	<u>max. desirable</u>		<u>max. desirable</u>		<u>max. desirable</u>	
Sharpest curve, °	18	11	25	11	25	--
Maximum Grade, %	7	--	7	--	10	--
	<u>min. desirable</u>		<u>min. desirable</u>		<u>min. desirable</u>	
Non-Passing Sight Distance	240	415	240	415	--	--

The principal gravel roads are surfaced with crushed gravel, while low-standard roads are surfaced with an all-weather pit-run gravel layer. Fortunately good gravel is plentiful along most of the Alaskan highways; therefore, very few roads are limited by adverse weather conditions.

Bridges

Bridges on through highways are designed for H-20 loading and have a roadway width of 24 feet. Bridges on secondary roads are designed for H-15 loading with 20-foot roadway width. Steel, concrete, and treated-timber bridges are used, and replacement of all native timber structures is now nearing completion.³

Short Work Season

Alaska's construction was short, generally lasting no longer than six months. This necessitated the seasonal employment of crews, long periods of idle equipment and increased unit costs. The Commission often scheduled bridge work for the winter season because it permitted longer employment for key personnel and the more efficient utilization of equipment. The Commission also had learned that the winter transportation of supplies and materials to advanced construction sites reduced costs, as did winter camp preparation and equipment overhaul.

The Permafrost Problem

One of the biggest problems confronting Alaskan construction was permafrost, and an accompanying phenomenon called "icing". The latter occurred when successive sheets of surface water froze, eventually forming a mass of ice. Thick and localized ice was called "Icing mound," and when it survived the summer it was known as "Taryn".

Stripping the protective moss cover off ground underlain with permafrost resulted in thawing, practically suspending the soil in water and creating an impenetrable mire which greatly hindered the operation of

road building equipment. On these types of soils, the Commission employed what it called "stage type construction," with slow excavation as the thawing progressed, and subsequent reshaping of the grade as differential settlement occurred. The type of soil encountered in thawing permafrost greatly affected the difficulties encountered. Porous, granular, gravel-type soils gave little trouble since water easily drained away, and then the soil became stable. Silty, kaolin or water-susceptible soils were avoided whenever possible because of its instability.

Place Fill Material Over Protective Cover

Long experience had shown that it was best to construct new roads without disturbing the protective insulating cover of the ground. This resulted in less differential settlement, and icing did not develop as often. Such construction consisted of placing borrowed fill material over the natural ground as carefully as possible so as not to disturb the natural cover. In fact, "even the location parties and tote road equipment are required to detour and travel off the final line whenever possible in order to avoid disturbing the natural ground cover". Still, while roads built without disturbance to the natural ground cover were less subject to icing and settlement, they needed to be reshaped repeatedly until a new equilibrium had been established between the various factors inherent in the permafrost areas.

Locate Roads Carefully

Careful observance of location criteria for roads and airfields could reduce construction problems to a minimum, the Commission had learned. For example, wherever possible locations should be developed on the south rather than the north slopes of hills and mountain ranges. Southerly exposures utilized the greatest heating effects of the sun, normally had lighter snowfalls and less permafrost, and therefore reduced subsequent maintenance problems caused by early freezing, late thawing, and icing. To be avoided were wet side hills or slopes with water seep-

ages since crumbling of the slopes and major mud slides could be expected, and ground icing was to be expected.

Problems of Bridge Construction

Bridge construction had to consider permafrost foundations, winter icing dangers, stream ice breakup and flow, termed "Debacle," and major channel shifting so common in Alaska's glacier streams. Additionally, many glacier streams and rivers experience extreme flash floods, caused by the bursting of glacier-dammed lakes or streams. Such flash floods irregularly raised such rivers as the Nizina, Knik, and Kenai by as much as twenty feet and caused heavy ice flows, bank erosions and drift problems. Such floods could occur at any season and when occurring in the winter caused considerable damage by carrying heavy broken lake and river ice against the bridges. During the spring these floods carried ice down from the glaciers and much ordinary drift materials consisting of trees, stumps and debris, all lodging against bridges.

Steel Piling Trestle Bents Practical

Experience had shown that clear span type structures, and mid-channel piers were very undesirable since special ice-breakers and protective structures always had to be built. On wide, flat streams most subject to icing, it often was uneconomical to utilize clear spans. Since "Debacle" was not an important factor in such streams, the use of steel piling trestle bents had proved very practical. The steel bents were designed without bracing in order to avoid hanging ice. While several feet of ice often did build up and cling to the steel piling, no actual loads resulted. Thawing temperatures had to prevail before the stream cut under the ice, and during such temperatures the heat conduction quality of the steel piles released the ice mass and permitted gradual settling.

Useful Piers Developed

In 1934, the Alaska Road Commission developed piers for bridges which were mostly of the steel "H" piling bent type and which proved highly to be very successful. They equalled concrete piers in permanence, and were practical particularly in isolated locations because of the comparatively simple handling and erection facilities required. They cost relatively little since they required no expensive excavation, from work, cofferdam or caisson construction, or underwater work common to concrete piers. They also were well adapted for use in frozen ground and could be installed as easily in the dead of winter as in the summer, an important factor in Alaska where much bridge work was performed in the winter when concrete pouring would require costly heating measurements.

Modified Steel "H" Piling Bent

In more recent times, the Alaska Road Commission adopted a modification of the steel "H" piling bent in the utilization of salvaged railroad rails. Commission employees fabricated piling by welding three rails together bell to bell. Using a seventy pound rail, this piling provided a section structurally superior to the ten inch "H" piling used previously. The ease of manufacture and driving had saved over one dollar per foot in place.

Maintenance Problems

Alaska also presented many unusual maintenance problems connected with the unusual effects of permafrost changes, ice phenomena, and arctic and subarctic operational hazards. Summer maintenance was very similar to that performed in the midwestern states. After the spring thaw, roads dried out and gravel sections became very dusty even though permafrost might only be a few feet below the grade. Regardless of the stability of the road foundation, underlying permafrost usually caused deformations over a period of years. Such uncontrollable forces as seasonal weather

changes and annual fluctuations in weather averages affected the thermal balance within the permafrost regime. Changes in the permafrost showed in subsidence or heaving of road sections. Under those circumstances, the flexible-type pavements used suffered the least damage from such deformations, although extensive crack sealing and spot paving, and occasional leveling, were still necessary to reestablish uniform vertical alignment. Chores such as brush cutting, ditch and culvert cleaning, spot graveling, and other maintenance jobs had to be performed during the summers. In addition, road crews also prepared for winter maintenance during the summers by placing culvert and snow stakes, erecting snow and ice fences, and flattening the gravel road crown in the fall to minimize the dangers of sliding into ditches on icy roads. It also included the creation of stock piles of sand and cinders for winter surface sanding.

Coping with Ground-Ice

Of necessity, the Alaska Road Commission developed methods of preventing and coping with winter ground-ice formations endangering highways and highway structures. Most of Alaska's roads experienced the effluent ground seepage ice, while river or stream icing was prevalent only in the interior. Therefore, maintenance crews most often had to cope with the former. It normally formed on side hill cuts, resulting in a sloping ice surface on the roads. This increased traffic dangers by crowding vehicles to the outer edge of the roads. Often this type of icing built too many feet in depth, and often formed slopes prohibiting the passage of any traffic. The Alaska Road Commission had developed a fairly inexpensive and workable method for controlling icing. Termed "ice fencing", it dammed off the seepage and controlled its freezing before it reached the roads. Since the actual head of water to be diverted is never more than the depth of the seepage film, the term "dam" was actually misleading and the actual fence used could be of light temporary construction. The Commission placed this fence between the seepage and the road, controlling the water by diverting the flow parallel to the road until it froze. The resulting vertical wall of ice could and did

build up considerably, and often required a second, and sometimes even a third lift of the fence during the winter. Vertical feet of ice as much as twenty feet high had formed parallel to the roads and had required only occasional lifting of the lightly constructed barrier.

Interception Ditches

Ice fences had considerably simplified the control of icing, but sometimes it was possible to avoid the problem entirely through the construction of interception ditches graded to pick up the seepage before it reached the road and thereby divert it into other drainage channels. This method was particularly effective where the ground water flowed near the surface and could be intercepted some distance away from the road.

Similar interception ditches had been very effective where the water preserved sufficient latent heat to keep from freezing until it had passed through the road drainage structures. Icing still occurred, but it was below the road and therefore posed no danger to the traffic. At times, the Commission had covered or insulated these diversion ditches protecting the channelled flow against rapid freezing, further delaying icing. Drainage structures and ditches in icing areas, therefore, had to be deep and narrow rather than shallow and wide open.

Where Icing Not Controlled Presents Spring Problem

Where roads are not maintained during the winter and icing has been allowed to build up uncontrolled, many problems result in the spring opening for traffic. In very bad cases, ice has covered sections of road several thousand feet in length to depths exceeding twenty feet. Removal requires blasting, cutting with tractor and bulldozer, use of heavy ice rooters, and repeated blading as the surface thaws during the spring. Sprinkling dirt or ashes to accelerate the sun's thawing effect works well, and the use of rock salt will speed the ice removal.

Snow Removal.

Most roads in Alaska's connected highway system were maintained on a year-round basis. They required snow removal operations six months of each year. Commission crews removed snow with light one-way throw blades, mounted on three and five yard trucks. These trucks traveled at about 30 to 35 miles per hour when blading snow. At that speed, the blade deposited the snow at a considerable distance from the road ditch.

Thompson Pass Snow Removal Spectacular

Very deep snow conditions occurred in Alaska's mountain passes. The Alaska Road Commission's most spectacular winter maintenance operation was that of keeping open Thompson Pass through the Chugach Mountains. Less than 3,000 feet above sea level, the pass lies 2,000 feet above the timber line. Snowfall averages about 350 inches a year, and gail force winds often rake the pass. Subzero temperatures are normal with extremes as low as minus 60°F. Snow removal equipment for Thompson Pass was huge. The Commission converted four large Kenworth trucks, each with a gross weight of 106,000 pounds into rotary and V-type plows. The rotary plows were equipped with the largest manufactured Bros. Model M-9 rotary heads powered with twin General Motors Corporation diesel units with a total of 400 horse powers. The Commission modified these rotary plows by extending the main plow cutting edges to provide sufficient clearance for the extra wide trucks. Specially designed V-plows and wing blades manufactured for mounting on these large trucks can clear a twenty foot wide swath of road at one pass. Additionally, Commission crews used standard road maintenance equipment on Thompson Pass consisting of a fleet of heavy tractor-dozers, several large twelve foot blade motor graders, and five yard dump trucks equipped with one-way front snow blades. Despite this array of equipment, the Commission had found it impossible to keep Thompson Pass open during severe storms, and it was normal to discontinue operations and halt traffic during such inclement weather. Closures ranged all the way to five days, but with total closed

time in any one winter not exceeding fifteen days. The Commission monitored traffic over the pass with shortwave radio stations on both ends, and through the maintenance camp in the center of the pass. When conditions were unsafe for travel, Commission crews erected road blocks at strategic control spots, and they also advised the various roadhouses situated along the approach to Thompson Pass of weather conditions. Good road markers were also necessary for locating the road after severe storms. Equipment had to be winterized in a special fashion and the Commission had built warm storage facilities at the critical points in order to keep the plows, graders and dozers in ready condition. In short, winter maintenance was very expensive, and Alaska posed many problems for road construction and maintenance not found in the contiguous states. Through trial and error the Alaska Road Commission had devised many techniques uniquely suitable for operations in Alaska's climate.

President Truman Requests Report On Commission

While the Alaska Road Commission coped with the vastly expanded road construction program in the Territory, President Harry S. Truman requested a report on the desirability of having the Commission perform some or all of the activities of the Bureau of Public Roads in Alaska. The Bureau response was swift and negative. Here was a large, powerful, and growing bureaucracy which had no intention of allowing the Alaska Road Commission to absorb its functions in the Territory.

Bureau of Public Roads Unwilling To Relinquish Alaska Functions

The Bureau stated that the proposal conflicted with legislation under which it was charged with the responsibility of administering the forest highway program in Alaska. Furthermore, the Bureau claimed, such a proposal would be contrary to Congressional intent reflected in legislation and hearings, all directing that the Bureau of Public Roads maintain an adequate organization in Alaska to administer its own functions and also to perform engineering and supervisory functions for the Alaska Road Commission on some of its major construction projects.⁴

Bureau of Public Roads Justifies Its Role

In fact, the Bureau felt very strongly that the Department of the Interior must have given misleading information to the president and the Bureau of the Budget concerning the nature and scope of the Bureau's Alaskan activities. Above all, Congress recognized the Bureau of Public Roads as the principal road planning and construction agency of the federal government. The Bureau reminded the president and the Bureau of the Budget that the Bipartisan Commission on the organization of the Executive Branch of the government, commonly referred to as the Hoover Commission, had recommended that federal transportation activities, then located in the various executive departments, be concentrated in the Department of Commerce. The Hoover Commission had recommended the transfer of the Bureau of Public Roads to the Department of Commerce. This had happened in 1949. One of the major functions of Commerce as expressed in its Organic Act was to "foster, promote, and develop the transportation facilities of the United States." For this reason the road building functions of the federal government were transferred to the Bureau of Public Roads.

Multiple Responsibilities of Bureau of Public Roads

That was not all. In addition to the Federal-Aid Highway program which involved the expenditure of about one billion dollars annually of federal and state funds, the Bureau, by law, was responsible for the administration of major highway programs in cooperation with other federal agencies. This included, for example, highways in national forests and parks, Indian reservation roads, public lands highways, defense access roads, and Bureau of Land Management roads. Additionally, it had taken an important part in major projects such as the Alaska Highway and the Inter-American Highway, and rendered technical assistance, advice and services to numerous nations abroad under various foreign assistance programs. The Bureau also cooperated in conducting research in highway planning, financing, administration, construction, operation, and maintenance in order to maximize benefits from the expenditure of public funds.

Congressional Intent Clear

The foregoing made it clear that Congress had wanted to center all highway construction activities in one agency, and that was the Bureau of Public Roads. Legislation over a period of years had confirmed Congressional intent. These enactments related exclusively to the Bureau of Public Roads and specifically authorized it to perform services for other federal agencies in connection with the construction of roads and bridges, including the preparation of plans, designs, specifications and estimates, the execution of contracts, supervision of the work, and the payment for such work involving the transfer of funds.

Bureau of Public Roads Criticizes Alaska Road Commission

Finally, the Bureau zeroed in on the Alaska Road Commission. Before 1948, it reminded President Truman and the Bureau of the Budget, the activities of the Alaska Road Commission had been largely confined to maintenance and force account work under very limited appropriations. When funds for vastly expanded Alaska road construction became available in 1949, the Commission concluded several agreements with the Bureau which provided that the survey and construction of major road projects would be handled under the engineering direction of the Bureau.

Transfer ARC to BPR

During the past several years, Alaska's delegate to Congress and the Territorial legislature had asked Congress to extend the Federal Aid Highway Act to Alaska. If extended, the functions and duties of the Alaska Road Commission would be transferred to the Bureau of Public Roads. In 1946, two Congressional Committees had recommended that such a transfer be effected, and in 1947 the Department of the Interior supported the proposal.

Bureau of Public Roads To Take Over Alaska Tasks

Taking all of the above into consideration, the Bureau recommended that it be given the responsibility of supervising all highway work in Alaska, at least until Alaska attained statehood. At that point, the Bureau would supply leadership and key personnel in helping the new state establish a highway department. The Bureau also would lend the new Alaska highway department a nucleus of personnel thoroughly trained in federal aid procedures and also intimately familiar with Alaska highway problems.

Conference To Resolve Problem

On November 20, 1952 the Bureau of the Budget called officials of the Departments of the Interior and Commerce to a meeting designed to resolve the conflict over which agency should handle road construction and maintenance responsibilities in Alaska. At the meeting, recriminations abounded. Bureau officials accused the Commission of having wasted funds through its concept of stage construction in cases where the pioneer road had to be abandoned when Congress authorized major improvements. The Commission charged that the Bureau had built precious few miles in Alaska's forests for all the monies it had received over the years. Interior Officials pointed out that Territorial officials had not been dissatisfied with the performance of the Commission, while they had been critical of the work performed by the Bureau. In fact, the Commission always had developed its construction programs for community recommendations and advice received from Territorial officials. In the final analysis, there was no resolution of the conflict, and the Department of the Interior decided to leave conditions as they were, if at all possible.

Enter The General Accounting Office

While the struggle between the Bureau and Commission went on, the General Accounting Office had reviewed the operations of the latter. It issued its report in the summer of 1952. Although lauding the Commission

for the progress made in road construction, the General Accounting Office was highly critical of the methods and procedures through which it obtained, controlled, and expended appropriated funds. It also noted that the construction standards of the Commission and the Bureau differed substantially. Moreover, each agency maintained a complete and distinct organization in Alaska, and each considered that it should be the responsibility for administering federal funds appropriated for territorial highway construction.⁵

General Accounting Office Observations

The General Accounting Office also noted the relationship of the Territorial Board of Road Commissioners to the Commission. The Board did not maintain its own organization, but through annual cooperative agreements with the Commission had it perform the construction and maintenance of Territorial local roads. These projects were financed by contributions from the Commission and the board. Unhappily however, Commission contributions had increased each year since 1948, while Territorial appropriations had decreased significantly. For example, in 1952 \$1,060,350 had been expended under this agreement, of which \$810,350 the Commission contributed and \$250,000 came from the Territorial legislature. In 1948 of the \$688,000 spent the Commission had contributed \$347,000 and the Territory \$341,000. The Territory collected these funds from a part of the proceeds of the Alaska motor fuel tax and operators' registration fees. The General Accounting Office criticized the gasoline tax of two cents a gallon, lower than in any state except Missouri. Motor license taxes went into the Territory's general fund and were not used for road construction or maintenance. Trucks operating in Alaska paid only a \$75 annual license fee, less than any of the 48 states charged.⁶

Territory Neglects Obligations

Although the Territory was responsible for highway regulation, it had largely neglected to perform this function. The Commission, therefore, had taken the initiative in enforcing many of the regulations

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required to protect the highways. For example, in April, May, and September 1952 the Commission installed three vehicle weighing scales on Alaska's major highways, and also operated them.⁷

Principal Activities of Alaska Road Commission Since 1948

Since 1948 the principal activities of the Commission consisted of administering contracts for the reconstruction and bituminous surfacing of portions of the Richardson and Glenn Highways, the reconstruction of the Haines Highway, and the force account construction of connecting roads to the main highway system. These included the Sterling Highway, and the Tok-Eagle road, both begun in 1946; and the reconstruction of the Tok Cutoff begun in 1947. The Bureau of Public Roads administered contracts on some sections of the Alaska, Richardson, and Glenn Highways with funds appropriated to the Commission. In 1948 began the construction of the Anchorage-Seward Highway with Commission funds. The Bureau of Public Roads, however, built most of the highway because it traversed the Chugach National Forest. Consequently, the responsibility of the Commission on this project was largely confined to holding the funds. It did build 12 miles of road between Anchorage and Potter in the summer of 1948, and supervised the paving of about 39 miles from Anchorage to Girdwood.⁸

The GAO pointed out that the conflict of standards between the Commission and the Bureau became evident when both submitted estimates for the reconstruction of the road between Seward and mile 58. The Bureau's estimate according to its standards, adopted by the Department of the Interior, was about \$2,000,000 higher than the Commission's estimate.⁹

GAO Objects To Commission Budgeting Practices

The GAO objected to certain Commission budgeting practices. For example, on the construction of the road from the Naknek airport to the Village, the Commission transferred \$550,000 from its paving funds to the Corps of Engineers before requesting Congress to appropriate the monies. Another example concerned the justification for a major project with a

cost estimate that was obsolete when it submitted an \$11,000,000 request for the Cordova-Richardson Highway. The Commission had arrived at that total by adding \$1,000,000 to an engineers report made in 1949. Yet in 1952, the project still had not reached a stage of planning where a reasonably accurate estimate of final costs could be made. The GAO recommended that the Commission fully inform Congress when funds approved and available for certain projects were transferred to cover obligations on other major highway projects in excess of the amounts approved in the Commission's budget justifications.¹⁰

Commission Temporary Employees

The GAO observed that the Commission hired a large number of temporary employees, both wage board and classified, at the beginning of each construction season. With wage board employees temporary appointments were limited to one year or less. Under the law, such individuals were not entitled to compensation for holiday pay unless they worked. In 1952, however, the Commission paid these temporary workers for Memorial and Independence Days in amounts of approximately \$13,500.¹¹

Commission Accounting System Changing

The Commission accounting system was in the throes of change in 1952. On June 30, of that year, the amounts recorded in the assets and liability accounts, as well as the cumulative project costs, were mostly inaccurate. The Commission distorted overhead charges by distributing them to individual work orders, and it had the permission to use appropriated construction funds without time limit. Monies received for operation and maintenance, however, could only be legally obligated during the year for which the appropriation was made. In 1952, the Commission reclassified certain projects from construction to operation and maintenance with the result that on June 30 the annual appropriation of \$2,940,000 which had been received for operation and maintenance had been entirely obligated. The GAO found that an equitable allocation of

overhead would cause the appropriation for operation and maintenance to be exceeded.¹²

GAO Recommendation

The GAO recommended that Congress create an interdepartmental transportation authority for Alaska which would promote the establishment of a sound and equitable revenue base to provide for further highway construction and the maintenance of those already built. It also urged Congress to review the need for two independent federal road building agencies in Alaska since it was not conducive either to economy or to effectiveness of effort.¹³

Obviously, the status quo was not to be preserved as the Department of the Interior had hoped. Indeed, the General Accounting Office was to scrutinize the Alaska Road Commission repeatedly until its demise in 1956.

Footnotes

1. Alaska Road Commission, "Condition of Alaska Highways, Quarterly Report," January 15, 1952, R. G. 30, Alaska Road Commission box 65415, Federal Records Center, Seattle, Washington.
2. Alaska Road Commission, "Alaska Road Construction and Maintenance Techniques," June, 1952, R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington. The subsequent discussion is based on this paper.
3. Ibid.
4. Statement of the Department of Commerce Regarding Performance of Road Construction and Maintenance Activities in Alaska, July, 1952, R. G. 30, Alaska Road Commission, box 65509, Federal Records center, Seattle, Washington. The subsequent discussion is based on this memorandum. Bureau of the Budget to Administrative Assistant Secretary of the Interior, November 18, 1952, Miller, Memorandum, "ARC-BPR relationship in Alaska, November 20, 1952, Miller, memorandum to Files". Study of BPR-ARC operations on roads in Alaska, "November 21, 1952, R.G. 30, Alaska Road Commission, box 65418, Federal Records Center, Seattle, Washington.
5. General Accounting Office, "Report on Survey and Review of the Operations of the Alaska Road Commission for the Fiscal Year Ended June 30, 1952," pp. 1-3.
6. Ibid., pp. 3-4.
7. Ibid., p. 4.
8. Ibid., pp. 5-6
9. Ibid., p. 6.
10. Ibid., p. 7.
11. Ibid., pp. 7-8.
12. Ibid., pp. 8-9.
13. Ibid., p. 12.

CHAPTER NINETEEN

THE FLUSH YEARS

In early November 1948, Colonel Noyes announced that he would hold a public hearing in Fairbanks on December 15 for the purpose of receiving and discussing information from all interested individuals about the use that would be made of highways if the Commission kept additional routes open during the winter.¹ As already stated, Congress had approved a massive six-year road construction program for the Territory which was to get underway in 1949. Inspired by military considerations, Noyes knew that the main roadways would have to be kept open anyway. Which additional ones warranted year-around maintenance, he asked himself? The hearing was to provide data on which to base decisions.

Supplying Roadhouses Along The Richardson Highway

The mere mention that highways might be kept open during the winter months delighted northern residents. G. H. Gilson, the manager of the Gilson Mercantile Co. of Valdez was one of these. Although the Valdez Chamber of Commerce intended to send a representative to the Fairbanks meeting, Gilson was eager to tell Noyes about the future plans of his own organization should the Richardson Highway be kept open. In July of 1948, Gilson recounted, he had inaugurated a weekly wholesale delivery service out of Valdez designed to supply the major needs of the small roadhouses and trading posts all the way to Eureka on the Glenn Highway; to Paxson on the Richardson Highway; and beyond Tok to Nell Kelly's trading post. The response to the new service had been very good, and within a month his firm supplied 26 businesses with fresh frozen meats, fresh produce, groceries, beer, clothing, and hardware. About the first of September, Gilson's customers inquired whether or not the road was to be kept open during the winter, and when it became known that it would not, many put in a winter supply of goods to hold them over until "we should show up again in the Spring." Gilson argued that Valdez was the logical distribution

center for the part of central Alaska his business served. In fact, he had competed very successfully with Anchorage and Fairbanks in supplying the various roadhouses. Despite the fact that he got a late start, many of the roadhouse owners had already laid in a large stock of supplies, and he only operated three months, he still did a gross volume of business worth \$48,000. Territorial Representative William A. Egan from Valdez likewise supported the winter maintenance of the Richardson Highway. Egan believed that as much freight would be hauled over the route in the winter as in the summer, and R. D. Kelsey, the manager of the Valdez Dock Company, promised to spend several thousand dollars to construct a warm storage facility to properly care for winter freight. Representative Egan, good politician that he was, added that winter maintenance not only benefited Valdez, but that the highway had to be kept open for reasons of national defense. Any difficulties could be solved during the first season, and if "any nation should attack us, we would already have established a vital permanent, speedy supply line to our troops at Interior bases. We should not then, after the trouble had started, have to wonder and theorize how best to establish an overland route from the coast to our northern outposts."²

Support For Winter Maintenance of Richardson Highway and Other Routes

Robert Atwood, the president of the Anchorage Chamber of Commerce and the editorial and publisher of the Anchorage Daily Times told Noyes that the Chamber endorsed winter maintenance of the Richardson Highway on a one year trial basis. This would certainly determine if the funds required warranted continued operation. In any event, such a move would certainly aid not only the Valdez economy but all of the cities of the interior. The Whitehorse Board of Trade firmly backed the idea of keeping open the various roads between the Yukon Territory and Alaska, but it was particularly interested in winter maintenance of the Haines road, a sentiment echoed by the Port Chilkoot Terminal Company, the Haines Chamber of Commerce, and the Veteran's Alaska Cooperative Company. Like the other supporters, the groups from Haines stressed that Alaska's

transportation network was the key to economic development and also a vital, "perhaps deciding factor in the defense of our Territory, the Dominion of Canada, and the United States." In fact, the more alternate routes were available, the easier it would be to supply and move an adequate fighting force. John Berdahl, the proprietor of Circle Hot Springs, was more modest in his request. He merely asked that the Commission make an effort to keep the Steese Highway open until October 15, two weeks longer than at present, and also have the road open for traffic by May 15 of each year. He did not claim national defense necessities, but merely pointed out that the highway served the historic Circle District where miners had produced gold since 1894. Although only a dozen placer mines operated in 1948, improved transportation undoubtedly would stimulate others to reopen mines, and best of all, the region, together with Circle Hot Springs, offered splendid recreational opportunities for residents and tourists alike.³ Some eighteen organizations and individuals had furnished Noyes with information on the desirability of winter maintenance for various Alaskan roads. Twenty-three individuals, representing as many organizations attended the public hearings in Fairbanks.

Hearing on Winter Maintenance

Colonel Noyes opened the hearing by remarking that the meeting was not designed to formulate a policy, but rather to collect information on which a policy could be based. Noyes also asked whether or not those favoring the opening of the main passes would be willing to make a cash contribution to help the Commission. Of those testifying, only three declared themselves willing to contribute funds for winter maintenance, but all urged the Alaska Road Commission to keep the highways open on a year-round basis, and if that was not possible, then at least extend the open season in the fall and clear the roads earlier in the spring. Major Allan Nesbitt of the 925th Engineer Aviation Group at Fort Richardson urged that the Richardson Highway be kept open for military purposes, a statement Noyes particularly appreciated because Armed Services support was essential for obtaining the additional funds needed.⁴

First Appropriation For Six Year Program and Bureaucratization

The hearing made it clear that Alaskans desired winter maintenance of their roads, but it also showed that they were unwilling, and often unable, to contribute funds for this purpose. As already stated, Congress appropriated the first installment of the massive six-year road development program for the 1949 working season, consisting of \$15,352,935.21. Thereafter, talk about local contributions subsided. The year 1949 also was a turning point for the Alaska Road Commission. With the infusion of millions of dollars, it quickly ceased to be the pioneer road constructing agency it had been for all of its existence since 1905 and rapidly developed into a modern highway construction and maintenance agency. As a consequence of this development, Commission procedures became more formal and bureaucratic. Many of the Commission employees, who had shaped the policies for so many years, were close to the end of their careers. Chief Engineer Taylor, replaced as head of the Alaska Road Commission in 1948 by Noyes, completed his twenty-eighth consecutive year of service with the Commission on June 1, 1949. G. H. Skinner, the Chief of the Administrative Division, topped Taylor's record with his thirty-one years of service. Noyes hired new faces. For example, Wayne C. Richie from Washington, D.C. became the chief of the Accounts Section, while George M. Tapley, a seventeen-year veteran of the Corps of Engineers, became the Chief of the Commission engineering Division; Eugene J. White joined the Engineering Division as the Chief of Surveys and Investigation Section. He formerly had worked for the General Tire and Rubber Company of Pasadena, California. Harold B. Schultz, previously bridge engineer with the Iowa State Highway Commission joined the Commission in charge of all bridge and structural design. F. E. Baxter, a former employee of the Nevada State Highway Department, joined the Commission as chief engineer of the Drafting Section, while his colleague Hamilton A. Higbi from Nevada became a draftsman for the Alaska Road Commission. Harry R. Bates transferred from the Bureau of Reclamation at Ephrata, Washington to the Commission as safety engineer, and Walter H. Daub, chief of the contracts Division, had come to Alaska directly after having served two

years in Korea as Chief Construction Engineer for the Department of Transportation, U.S. Army, while Guy E. Carter, Chief of the Contract Analysis Section came to Alaska from the Idaho Bureau of Highways. Scores of new employees joined the Alaska Road Commission, rapidly changing the character of the Commission.⁵

Sterling and Taylor, Pioneers

One of the pioneers of the Commission, Hawley W. Sterling died in Seattle in September 1948. For sixteen years he had served as Assistant Chief Engineer of the Commission. He had supervised the construction of the Steese Highway from Fairbanks northeastward to the Yukon River at Circle; he had laid out and generally supervised the construction of the Glenn Highway connecting Anchorage with the Richardson and Alaska Highways; and he had laid out and started construction of the 120 mile long highway extending down the Kenai Peninsula from the western boundary of the Chugach National Forest to Kenai, Kasilof, Ninilchik, and Homer. In December 1949, the Secretary of the Interior, with the approval of Alaska's governor, honored this pioneer road builder by designating the Kenai Peninsula road the Sterling Highway. Already open to limited traffic, it was slated for completion in the summer of 1950. And at the end of December 1949, Chief Engineer Taylor announced his retirement, to be effective February 1, 1950. He had spent thirty-six years in federal service, all but two in Alaska. Taylor had come north in 1916 and gone to work as a young engineer for the Alaska Engineering Commission which built the Alask Railroad. In 1921, he started working for the Alaska Road Commission as superintendent for the Fairbanks District. He was promoted to assistant Chief Engineer in 1923, and to Chief Engineer in 1932, assuming complete responsibility, under the governor of Alaska, for the operations of the Alaska Road Commission. An industrious and efficient man, he had utilized the small Congressional appropriations to the utmost. It must have pleased Taylor to be able to participate in the paving of the main roads which began a year or so before his retirement.⁶

Pioneer Nash

A year later, in October 1950, the Commission announced the impending retirement of Frank Nash, the district engineer for Fairbanks. Nash had started his career with the Commission on June 1, 1924, serving as a surveyor, foreman, and engineer until 1929 when he assumed the duties of acting superintendent for the Fairbanks District, a job later reclassified to district engineer. When Nash started his career with the Commission, Fairbanks still was a raw little pioneer community, and much of the travel in the interior was still by dogteam. He was an expert dogmusher, and had made many long and often arduous journeys by dogteam for the Commission exploring the Yukon and Tanana River basins before there were any roads.⁷ In short, the sourdough employees were retiring to be replaced by professional engineers and road builders with University degrees.

Accomplishments

At the end of 1949, the Alaska Road Commission proudly announced that it had accomplished much road work in the Territory which included the hard surfacing of the main highways, major improvements in existing roads, and much new construction. Since 1905, the Commission had built, and now maintained, 2,981 miles of automobile roads. Of this mileage, 934 miles of through roads included the northern end of the Alaska Highway and its main extension to Anchorage, Valdez, and Haines. Connected to this system of through roads were 356 miles of feeder or secondary roads, and 564 miles of local or third class roads for a total of 1,854 miles of automobile highway connected through the Alaska Highway with Canada and the contiguous states. Additional mileage in Canada included 1,221 miles of the Alaska Highway and 108 miles of the Haines Highway which the Canadian Government maintained through the Northwest Highway System and the Canadian Army. Within Alaska, the Commission had built and maintained another 1,000 miles of secondary and third class roads serving isolated communities and mining centers, which were not connected to the main highway system. In 1949, the Commission had paved 149 miles of roads extending

eastward from Anchorage and Fairbanks with a light bituminous surface. It had another 150 miles for paving under contract, slated for completion in 1950. It planned to pave the entire through road system at a cost of approximately \$45,000,000.⁸

Surfacing Work

To provide asphalt for the surfacing work, the Commission had installed two large asphalt storage plants at the ports of Valdez and Anchorage, permitting bulk delivery of asphalt in ocean tankers. Kept hot in storage tanks, contractor trucks carried the material to the work sites, often several hundred miles inland. The Commission also completed and reconstructed to all-weather gravel standard the road extending 85 miles northwestward from Fairbanks to Livengood. The Livengood road represented the furthest northward and westward extension of the main highway system, and would be the start of any extension of the road system toward Nome on the Seward Peninsula and the Arctic.⁹

New Projects

Among the new 1949 projects was the 71 miles long Turnagain Road which was to connect Seward and the Kenai Peninsula with Anchorage and the main highway system. The Alaska Road Commission, the Bureau of Public Roads, and the Alaska Railroad had undertaken the project under the terms of a cooperative agreement, with completion scheduled for the summer of 1951. The Commission hoped that after it was finished the road would open the scenic Kenai Peninsula to tourists from the contiguous states, assist in the settlement of good agriculture lands on the western side of the Peninsula, and provide an alternative access to the port of Seward.¹⁰

The Sterling Highway, stretching 120 miles down the westside of the Kenai Peninsula was already open for traffic and planned for completion by the summer of 1950. Part of the main Kenai Peninsula road system it was to link with Anchorage by the completion of the road along Turnagain Arm. Still another new road branched off northward from the Alaska Highway to

the gold mining district of the Fortymile River. About 70 miles of the road had been completed, almost reaching Jack Wade. There it was to be connected with a road largely in Canada extending to Dawson in the Yukon Territory. The Commission planned to complete this route to the Canadian border by the summer of 1950, and then continue it through Alaska another 40 miles to Eagle on the Yukon River.¹¹

The Denali Highway

The Commission intended to begin construction in 1950 of a 150 mile long road from Paxson's Lake to connect with Mt. McKinley National Park. Requiring several years for completion, the road eventually was to connect to Cantwell on the Alaska Railroad as well as 95 miles of existing automobile road at McKinley Park Station. This would enable residents and visitors alike to drive across the National Park to within 30 miles of the famous mountain.¹²

Local Road Development

Already under way was a program of local farm and industrial road construction, which included approximately 30 miles of secondary and third class roads in the Fairbanks, Anchorage, Palmer, and Homer areas. Progressively extended year by year, these roads were to serve settler needs. The Commission stated that the road system radiating out from Nome on the Seward Peninsula and serving that city as well as Solomon, Council, and the Kougarok mining district, about 275 miles long, was the most isolated one. Connected, but not included in the mileage, was the Seward Peninsula Tramroad, some 80 miles of three foot gauge railroad which the Commission maintained as a common highway. Small, gasoline-powered motor vehicles and cars drawn by dogteams used the tramroad. In addition to the Nome system, the Commission had built isolated local roads in years past to serve the mining areas around Ruby, Takotna, Flat, Manley Hot Springs, Eureka, Wiseman, and many other locations.¹³

The 1949 Season

During the 1949 summer the Commission carried out routine maintenance chores which included regrading, gravelling where necessary, the placement of signs and aids to the motorists, and repairs of damage caused by spring breakup. Winter maintenance, however, was a serious problem, and the mountain passes between Valdez and Fairbanks had never been kept open during the winters. For the 1949-1950 winter the Commission had decided to experimentally keep open Thompson Pass through the coastal mountain range, enabling use of the port of Valdez throughout the cold season. The Commission already cleared snow from the Territorial segment of the Alaska Highway, the Glenn Highway, and the Tok Cutoff, connecting both Fairbanks and Anchorage to the Alaska Highway and thence to the contiguous states. The Commission also cleared snow from local roads around major cities, enabling school buses, mail carriers, and private automobiles to operate.¹⁴

Principal Elements of Six Year Plan

The Alaska Road Commission had included plans for the future improvement and extension of the Territorial road system in the famous six-year plan Congress had approved. Revised annually, it was to keep pace with Alaska's general development as well as local needs. This plan included the following principal elements:

1. Improvement to a hard-surfaced standard of the Through Roads of Alaska, including the Alaska Highway, Richardson Highway, Glenn Highway, Tok Cutoff, Haines Highway, Anchorage-Seward Road, and certain short, heavy traffic roads around Fairbanks and Anchorage.
2. Extension and improvement of Feeder roads to serve all principal inhabited localities in Alaska.
3. Provision of local farm and industrial roads adequate to serve all communities.
4. Completion of a road along Turnagain arm connecting Anchorage with the Kenai Peninsula and Seward.¹⁵

Oil On The North Slope

Slowly the dreams of the pioneers of the Alaska Road Commission neared realization. There were other dreams. For example, Commission personnel learned in the fall of 1950 that the Navy had discovered oil on Petroleum Reserve No. 4 on Alaska's Arctic Slope. Chief Engineer A. F. Ghiglione discussed the discovery with the Navy officer in charge of the project, and learned that the Navy did not plan highway access but only had considered the construction of a pipeline. The Navy agreed, however, that the route of any pipeline would definitely be made to approximate any highway location into the area. Ghiglione and the Navy officer agreed that the logical route for both a pipeline and highway would be via Anaktuvuk Pass in the Brooks Range, down the John River Valley through Bettles and then to the Yukon River near Stevens Village. This route, Ghiglione observed, would then tie in to the Commission-completed road survey between Livengood and the Yukon River.¹⁶ It was a premature plan, and a haul road to the North slope was not built until the mid-1970s in conjunction with the development of the Prudhoe Bay oilfield.

A Busy Season Accomplishes Much

In the meantime, the Commission started conversion to winter operations in the late fall of 1950, preparing for snow removal and all the other duties cold weather brought. It had been a hectic summer. Congress had appropriated \$23,622,376.10 for the work, the Alaska Fund had added another \$216,620.09, and some \$431,019.44 had come from other sources. The Commission had built 25 miles of new access roads in the Anchorage area which opened considerable acreage for settlement east of the city in the foothills of the Chugach Mountains. The massive paving program of the main arterial system had progressed smoothly, and the Sterling Highway had been completed. An editorial in the Anchorage Daily Times lauded the achievements of the Commission, stating that for employees it may have been just another year in the long history of the agency. It was, however, "a bigger year because of the millions of dollars invested

in roads," and the activities of the agency had been of the same high caliber that had "made the ARC one of the pillars of the Alaska development program". In fact, "through the fine leadership of its executives and the high caliber of its employees out on the job, it has made itself one of the most popular and respected agencies in the territory." Commission employees had often gone beyond the call of duty by towing cars of drivers who ventured where only tractors could move; taken stranded drivers to road camps and offered them food and warmth in emergencies; politely guided and assisted motorists in bad spots; employees at remote camps had been roused at odd hours of the night to assist those in distress, and "instead of dwelling on the foolish line of events that led up to the crisis, the men have consistently concentrated on rendering whatever 'first aid' is needed, even though it is to their own inconvenience." The editor concluded that this was a unique record, extending many years back into Alaska's history. The agency earned its reputation in the early days by making itself an integral part of Territorial life and taking a personal interest in the welfare of travelers. Better yet, even with the great growth the agency experienced during the last few years, it has "perpetuated the customs and traditions that made it great in the eyes of Alaskans".¹⁷

Bureau of Public Roads Criticized

The praise pleased the administrators and employees of the Alaska Road Commission. Although many of the veterans of the Commission had retired by now, the professional managers were proud of this historical record and continuity of their agency. By 1951, the Commission also had far outdistanced the Bureau of Public Roads which, since 1922, had maintained its own organization in the Territory and performed all road construction in the Tongass and Chugach National Forests. In the summer of 1951, Governor Ernest Gruening told the Secretary of the Interior that the Bureau of Public Roads applied methods and standards of road construction in its area of exclusive jurisdiction which, although long applied and accepted in the contiguous states were wholly inappropriate and

unacceptable in Alaska. The Tongass and Chugach National forest embraced southeastern Alaska and the Kenai Peninsula and in the area surrounding Prince William Sound respectively, regions of relatively dense population and economic importance. They contained the three largest of Alaska's five principal towns, namely Juneau, Ketchikan, and Sitka as well as five of the seven towns next in importance, namely Petersburg, Wrangell, Cordova, Valdez, and Seward. For years new road construction in these areas had been practically negligible, evoking much discontent among residents. From each of these towns, except Valdez, it was possible to drive only a short distance. Yet usage of the limited road system was heavy. Southeastern Alaska, for example, an area of 34,391 square miles and larger in size than the combined areas of New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island, only had 124.8 miles of highway.¹⁸

Gruening Critical of Bureau

Gruening charged that the Bureau had never shown much energy nor enterprise in securing federal appropriations for road construction in Alaska. In fact, for a decade, and until 1950, it had passively assented to drastic reductions in the appropriations it was entitled to under a formula originally devised by Congress. The Bureau also refused to heed the wishes of the population which wanted the road mileage extended. Instead, it had persisted in using its funds in improving, widening, and straightening the small mileage, "a largely" unnecessary and wasteful performance. Indeed, the common sentiment was that "never have so many dollars built so few miles." Additionally, the Bureau of Public Roads was extravagant in its road building and reconstruction activities. There was no need to eliminate curves on short stretches of scenic roads, yet "they move hillsides and blast vast masses of rock to straighten out a curve which not only needs no straightening out but is actually preferable on a short stretch of road which is obviously not part of a trunk highway...." Finally, a comparison between Commission and Bureau projects showed that the former built roads at a cost of about

\$45,000 per mile, while the Bureau, for merely reconstructing and surfacing 6.9 miles of existing Tongass Highway had budgeted \$1,890,000, or some \$270,000 per mile. Congress had appropriated \$7,000,000 for the Bureau of Public Roads and the Forest Service. Gruening had discovered that half of that sum was to produce only 2.7 miles of new construction. That clearly was intolerable. Gruening therefore requested that Secretary of the Interior Oscar L. Chapman investigate the situation, and follow it by transferring the functions of the Bureau of Public Roads to the Alaska Road Commission. Gruening asserted that there was no valid reason that the Territory should have three road constructing agencies, namely the Alaska Road Commission, the Bureau of Public Roads, and the Alaska Territorial Board of Road Commissioners. The latter contracted with the Alaska Road Commission since it did not have an independent construction division. Some individuals within the Office of Territories had suggested that Alaska should wait until it attained statehood before initiating any changes. Statehood, however, was not likely to come for a number of years.

Gruening urged that "we cannot afford to wait. The need for stopping waste is immediate." He suggested that the transfer be made by executive order.¹⁹ The desired change did not occur, and when the consolidation finally occurred in 1956, the Bureau of Public Roads absorbed the Alaska Road Commission.

De Armond Defends Bureau

Robert N. De Armond, a conservative columnist, disputed Gruening's criticism of the Bureau of Public Roads. He pointed out that the Commission had received its large appropriations because it was engaged in national defense work, and it had been "much easier for a number of years to secure an appropriation carrying a defense tag than almost any other kind of appropriation". The Bureau of Public Roads had not enjoyed this advantage. In fact, most of its work occurred in southeastern Alaska which was of little military interest. The Bureau, therefore, had to justify its road program for the development of natural resources, particularly

pulp mill sites which were close to town. Road improvements contemplated were between towns and potential pulp mill sites. The Bureau had learned from long experience that rebuilding roads time and again was very expensive. Why not build for the faster and heavier traffic in the first place? In De Armond's opinion, the Bureau seemed to have a well-planned program of road development for southeastern Alaska, and it was "carrying out that program with the funds allotted to it, rather than spreading the funds around by the rule of political expediency".²⁰ What De Armond had missed entirely was that the Bureau had expended millions of dollars over the years and had built precious few miles of roads.

Commission Accomplishments

While the struggle over preeminence between the Alaska Road Commission and the Bureau of Public Roads continued, the former accomplished much in the 1951 season. By the late fall of 1951, the Glenn Highway between Anchorage and the Richardson Highway had been completely hard surfaced except for a 16 mile section in the vicinity of Sheep Mountain. The Commission also reconstructed the remaining portion of the Glenn Highway between Big Timber and Tok Junction, formerly known as the Tok Cutoff, and eliminated most of the sharp curves and also substantially widened the road bed. Included in the work was a relocation of the road around the east side of Mentasta Lake which shortened it by about nine miles. Between Valdez and Big Delta on the Richardson Highway the Commission supervised four contracts for grading. Three of these included hard surfacing. McLaughlin Incorporated did the work between Valdez and mile 36, and about completed the grading between Valdez and Thompson Pass, widened and paved the tunnel in Keystone Canyon, and eliminated many steep grades and sharp curves. C. F. Lytle and Green Construction Company worked between miles 82 and 130. They completed all grading and hard surfaced between miles 82 to 120. The A. J. Hooper Corporation had contracted the section from Big Timber to Paxson for grading only. It completed about 15 miles south of Paxson, and prepared the remainder for rebuilding in 1952.²¹

Contractors

C. F. Lytle and Green Construction Company held the fourth contract between Rapids and Big Delta, which included both grading and paving. The companies constructed a line change between Rapids and Donnelly designed to eliminate flood damage by the Delta River. It hoped to complete all grading and hard surfacing in the 1952 season.²²

Anchorage-Seward Highway Opened

In an impressive ceremony on October 19, 1951 at Girdwood the Commission formally dedicated and opened the new 128 mile Anchorage-Seward Highway, another link in the main arterial system. Portions of the old Seward-Hope road, between Seward and mile 58, were still under reconstruction preparatory to paving, while the Commission had placed the section from Girdwood to Anchorage under contract for hard surfacing. The Commission intended to award additional paving contracts for the 1952 season for the Anchorage-Seward Highway. These were to be administered by the Bureau of Public Roads under a cooperative agreement with the Alaska Road Commission.²³

Paving Alaska Highway

Under a similar agreement, the Bureau of Public Roads administered a regrading and paving contract of the Alaska Highway eastward toward Johnson River. The Rogers Construction Company and Babler Brothers were the contractors. They had a line change near Halfway House under construction which, when finished, eliminated much winding road with dangerous blind curves. It was to be finished in the summer of 1952.²⁴

The Taylor Highway

The Taylor Highway, named after retired Chief Engineer Ike P. Taylor, extended northward to Eagle for the Alaska Highway, and included a branch

connecting at Boundary with the road to Dawson. The road had almost been completed during the 1951 season. Two more bridges and bridge approaches had to be built. When finished, travel to Eagle would be possible in the summer of 1952. On August 16, 1951, the Commission held a ceremony at the Alaska-Canada boundary which officially opened the branch road to Boundary and Dawson.²⁵

Other Commission Projects

The Commission continued work on the Richardson Highway - McKinley Park Road concentrating efforts at the west end. It pushed a pioneer road from Cantwell to McKinley Park Station. Only the construction of bridges across the Nenana River remained before travel between these points was possible. In addition to maintaining almost 3,000 miles of road, the Commission also completed paving of the Alaska portion of the Haines Highway, and widened and improved the Sterling Highway from its junction with the Anchorage-Seward Highway to Homer.²⁶

Local Roads

The Commission also extended, as much as funds would permit, the farm and industrial road system, building approximately 20 new miles, and reconstructed and surfaced 30 miles of low standard roads. At the request of various governmental bodies, the Commission built an additional 20 miles of road on the basis of cooperative agreements. In order to handle the enlarged highway program, the Commission also had to erect several new buildings, including a new warehouse at Fairbanks, a warm storage building and a dormitory at Glennallen, and setup twenty 30 foot house trailers at Valdez to provide housing for engineering personnel employed on the many contracts in that area. And finally, the Commission once again prepared to keep the Richardson Highway over Thompson Pass open during the winter. This would make for year-around maintenance for the third consecutive winter. The Army had made funds available for this undertaking, and as a result Valdez had become a valuable all-season seaport

through which large volumes of military and civilian freight moved to Anchorage and Fairbanks.²⁷ By the end of 1951, the beneficial effects of the Cold War on Alaska were apparent everywhere, particularly in the paving program which enabled northern residents for the first time to drive long stretches without choking on dust.

Footnotes

1. "Notice of Public Hearing To Be Held At Fairbanks, Alaska on 15 December 1948 To Discuss Winter Maintenance of Highways In Alaska," R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington.
2. Gilson to Noyes, November 27, 1948, Kelsey to Noyes, October 6, 1948, Egan to Noyes, December 8, 1948, R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington.
3. Atwood to Noyes, December 13, 1948, Whitehorse Board of Trade to Noyes, December 14, 1948, Port Chilkoot Terminal Company to Noyes, December 1948, Berdahl to Noyes, December 1948, R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington.
4. Summary of Public Hearing, Fairbanks, Alaska, December 15, 1948, R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington.
5. Alaska Road Commission Press Release, April 3, 1949, R. G. 30, Alaska Road Center, Seattle, Washington.
6. Alaska Road Commission Press Releases, December 11, 28, 1949, R. G. 30, Alaska Road Commission, box 65414, Federal Records Center, Seattle, Washington.
7. Alaska Road Commission Press Release, October 3, 1950, R. G. 30, Alaska Road Commission, box 65414, Federal Records Center, Seattle, Washington.
8. Alaska Road Commission Press Release, December 21, 1949, R. G. 30, Alaska Road Commission, box 65414, Federal Records Center, Seattle Washington.
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
15. Alaska Road Commission, "Six-Year Plan," January 17, 1950, R. G. 30, Alaska Road Commission, box 65414, Federal Records Center, Seattle, Washington. The following is a list of existing roads as of September 7, 1949:

THROUGH ROADS

	<u>Miles</u>	
Richardson Highway.	365	
Glenn Highway	189	
Tok Cut-Off	136	
Alaska Highway.	203	
Haines Highway.	41	934

FEEDER ROADS

Connected with the Through Road System

Steese Highway.	162	
Elliott Highway	71	
Edgerton Cut-Off.	39	
Anchorage - Potter.	11	
Alaska Highway - Forty Mile - Eagle	57	
Fairbanks - College	5	
Anchorage - Lake Spenard.	3	
Circle Hot Springs.	8	362

FEEDER ROADS

Not connected with the Through Road System

Ruby - Poorman.	56	
Nome - Solomon.	33	
Kenai Lake - Homer.	81	
Mt. McKinley Park Road.	96	266

LOCAL ROADS

Connected with the Through Road System

Nabesna Branch.	44	
Branch Roads, Richardson Highway.	33	
Branch Roads, Alaska Highway.	7	
Branch Roads, Steese Highway.	128	
Branch Roads Elliott Highway.	16	
Anchorage Local Roads	67	
Fairbanks Local Roads	48	
Palmer Local Roads.	197	
Branch Roads, Haines Highway.	24	564

LOCAL ROADS

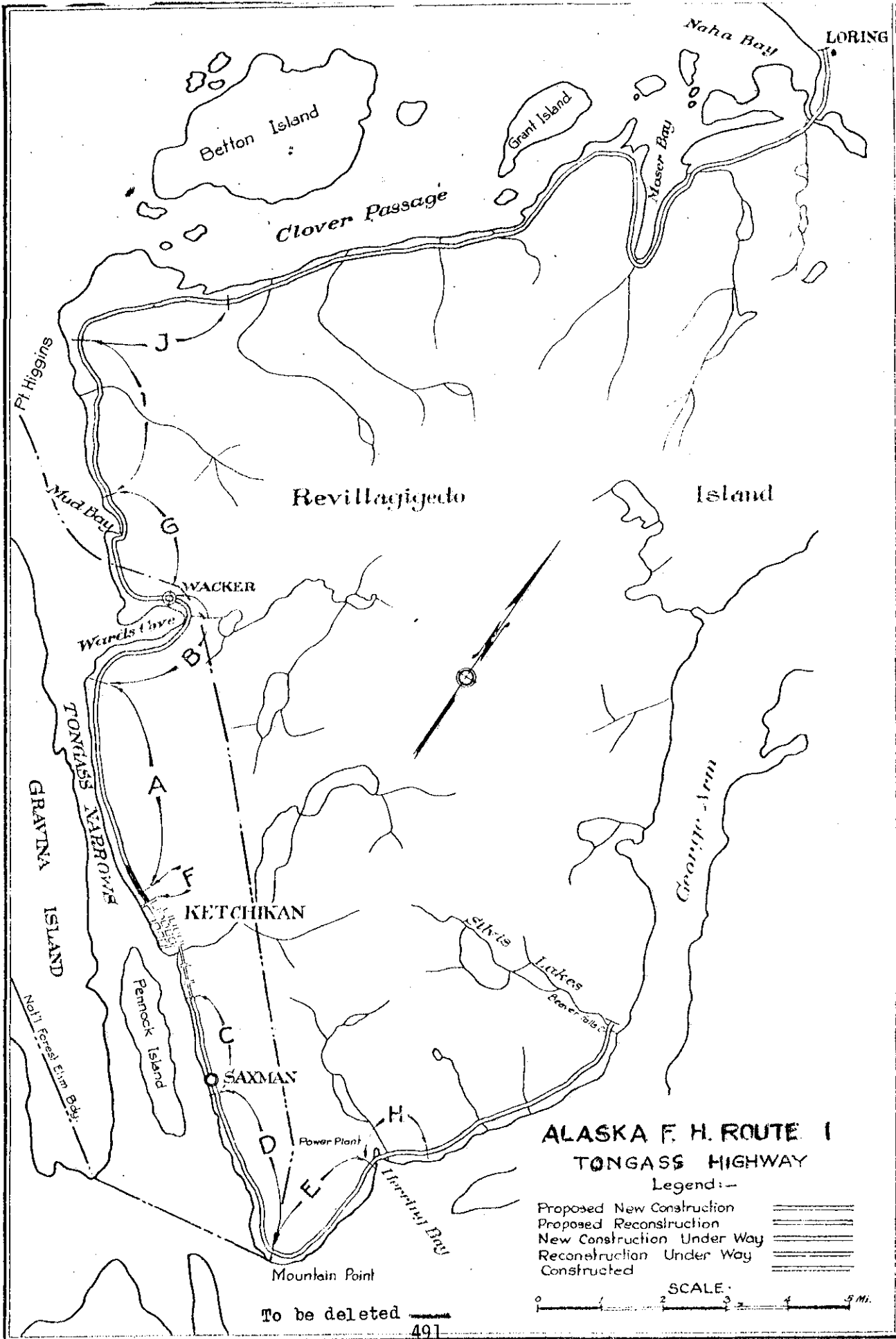
Not connected with the Through Road System

Nome local roads.	66	
Seward Peninsula Mine Roads	177	

Seward Peninsula Tramroad	80	323
Takotna Roads	<u>71</u>	
Flat Roads.	36	
Manley Hot Springs Roads.	48	
Branch Roads Ruby-Poorman	10	
Wiseman System.	13	
Kenai Peninsula Roads	49	
Roads connecting with the Alaska Railroad.	94	
Eagle Roads	32	
Jack Wade - Boundary.	18	
McCarthy Roads.	31	
Iliamna Roads	28	
Dillingham Road	10	
Annette Island Road	15	
Isolated Roads connecting with River or Ocean transportation	<u>83</u>	<u>861</u>
TOTAL		2,981

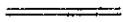
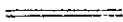
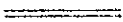


R. G. 126, file 9-1-55, Alaska Road Commission General, part 7, N.A.

16. Flakne to Noyes, September 27, 1950, Ghiglione to Flakne, October 4, 1950, R. G. 30, Alaska Road Commission, box 65412, Federal Records Center, Seattle, Washington.
17. Alaska Road Commission, Annual Report, 1955, p. 47; Anchorage Daily Times, November 8, 1950.
18. Noyes to Davis, April 10, 1951, Gruening to Chapman, June 13, 1951, R. G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington. The enclosed maps show some of the Forest Highways in southeastern Alaska. R. G. 30, Alaska Road Commission, box 65509, Federal Records Center, Seattle, Washington.

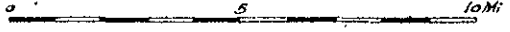



ALASKA F. H. ROUTES 2 & 31 GLACIER AND DOUGLAS HIGHWAYS

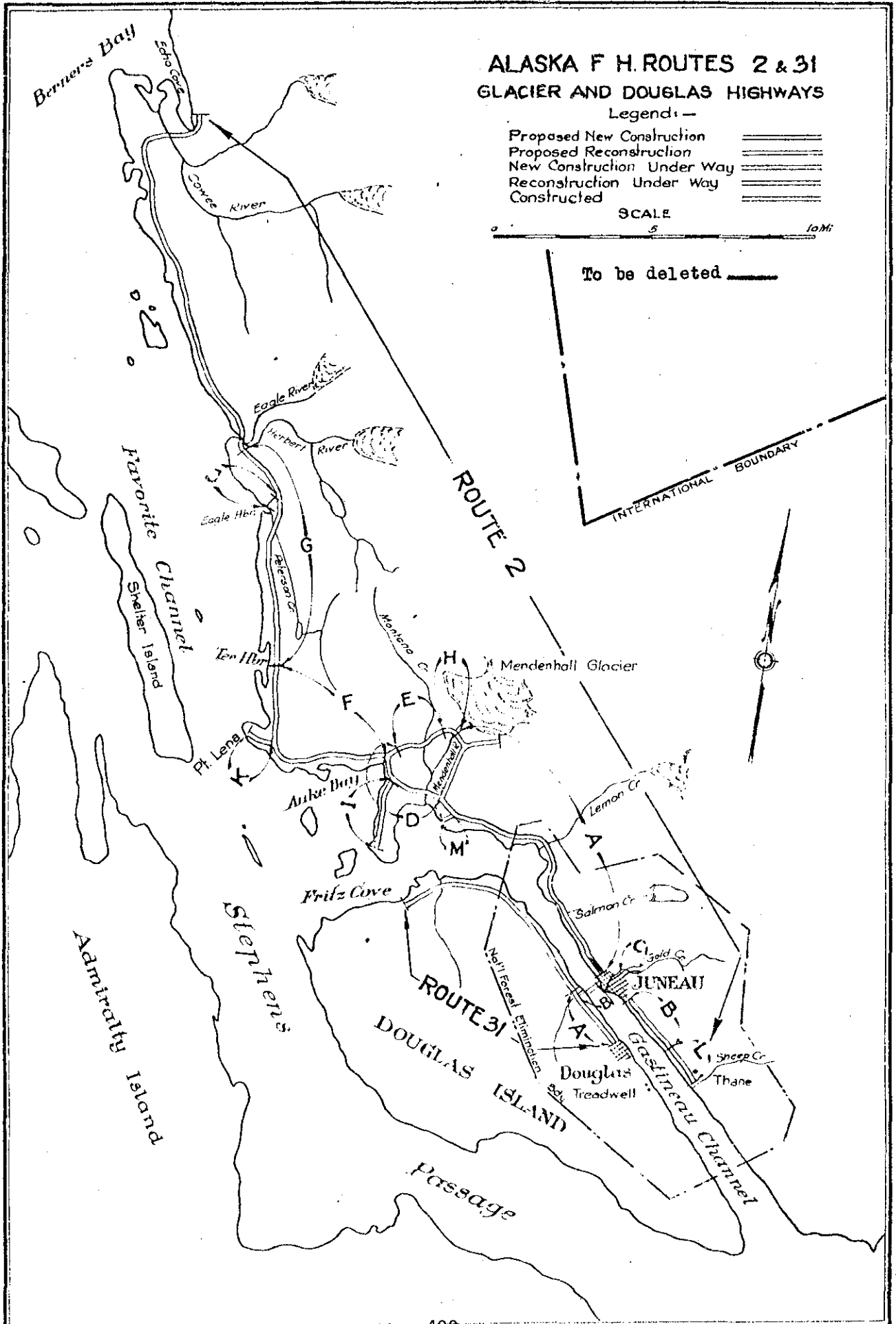
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- Proposed Reconstruction 
- New Construction Under Way 
- Reconstruction Under Way 
- Constructed 

SCALE



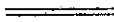
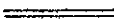



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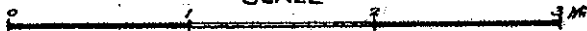
ALASKA F. H. ROUTE 11


SITKA HIGHWAY

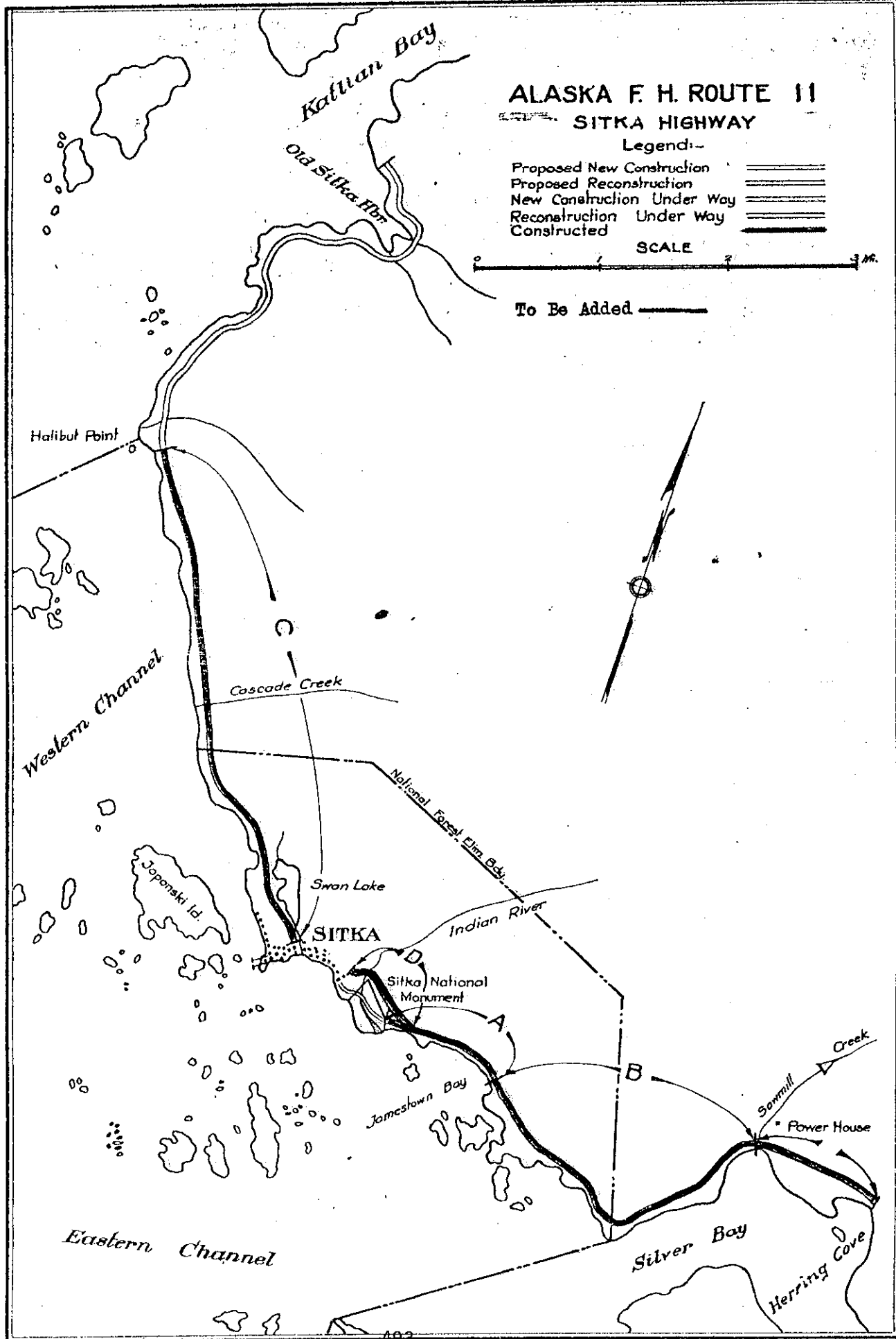
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- Constructed 

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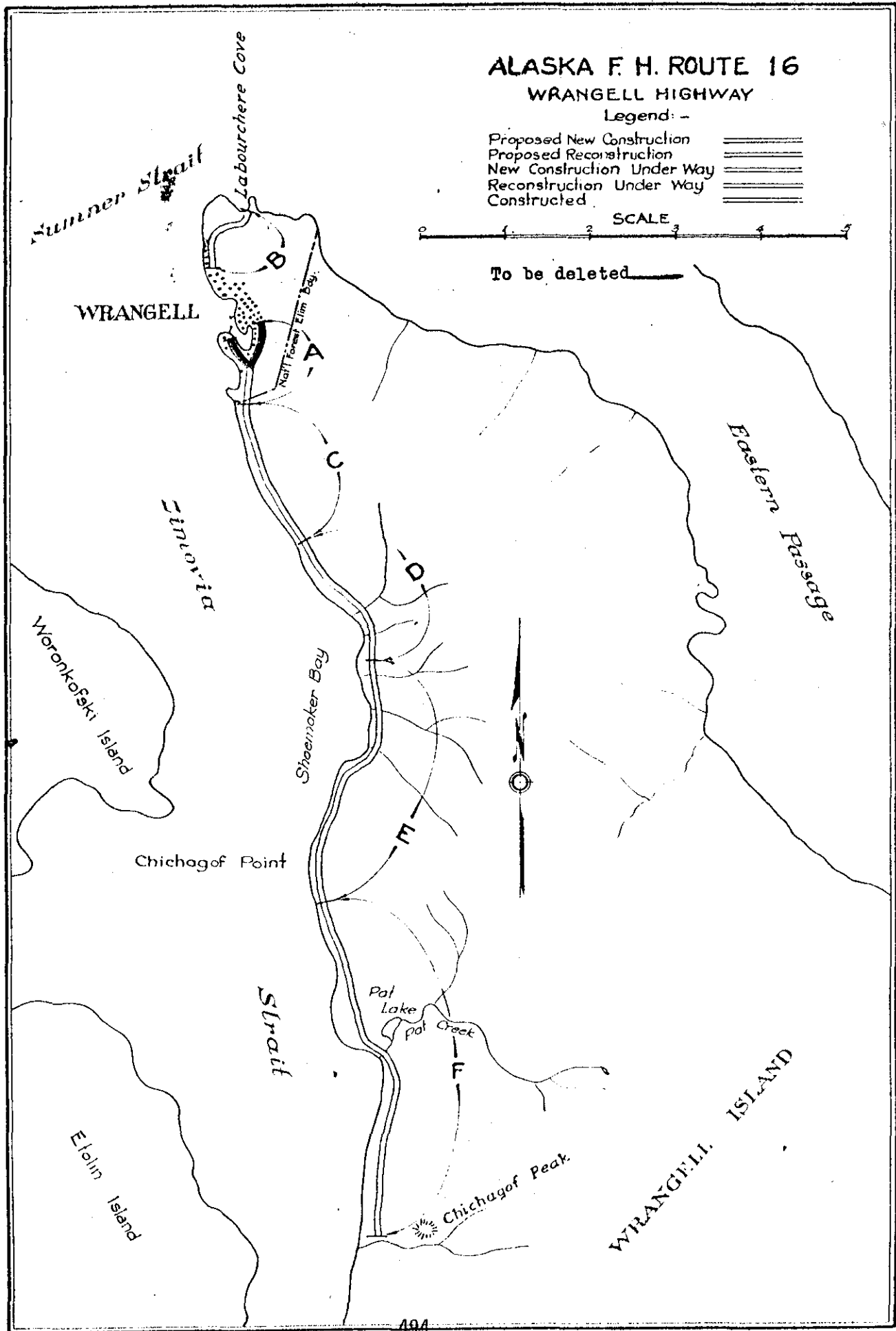
ALASKA F. H. ROUTE 16 WRANGELL HIGHWAY

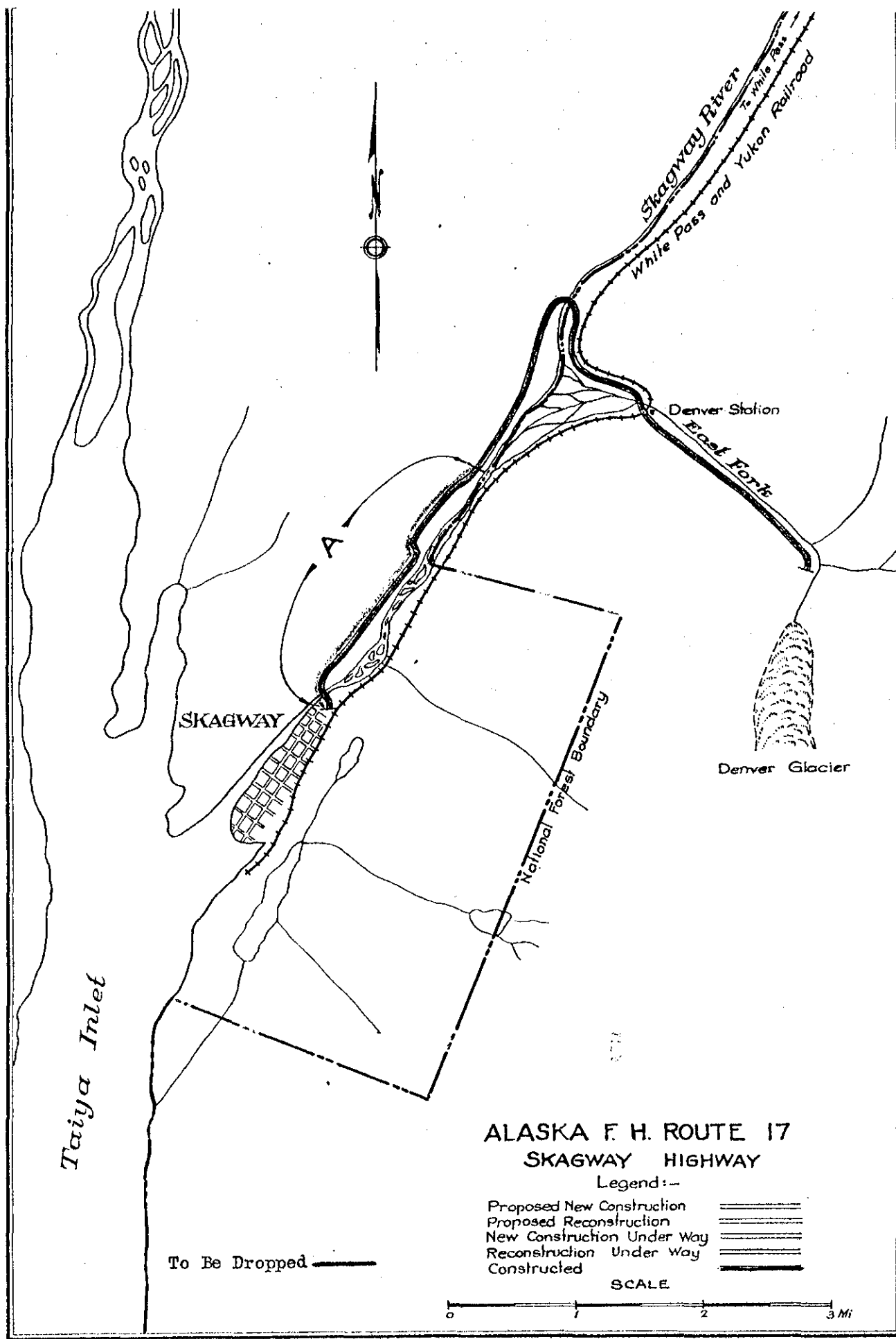
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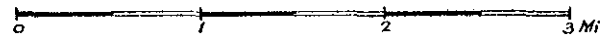


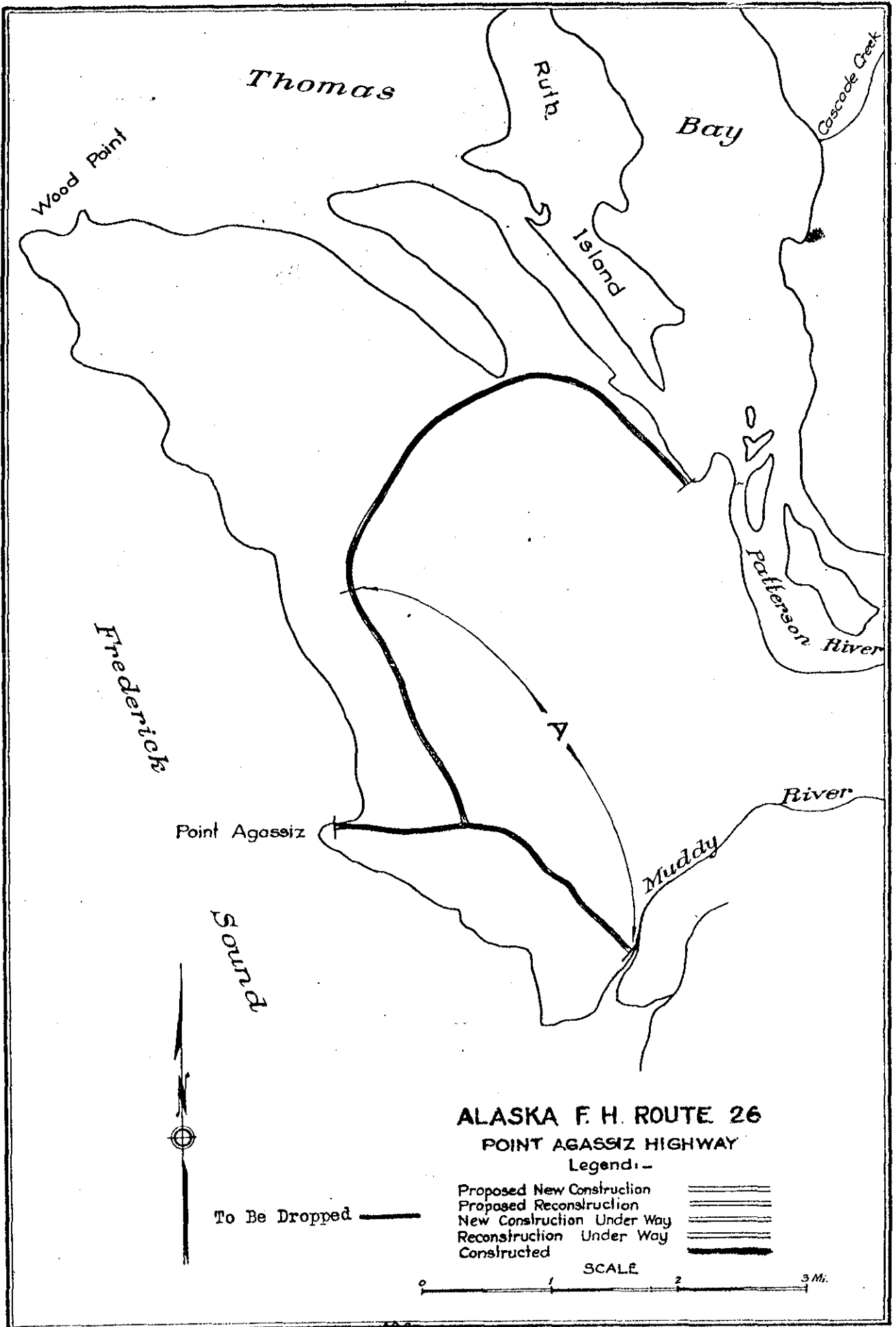
**ALASKA F. H. ROUTE 17
SKAGWAY HIGHWAY**

Legend:-

- Proposed New Construction
- Proposed Reconstruction
- New Construction Under Way
- Reconstruction Under Way
- Constructed

SCALE





Thomas

Bay

Wood Point

Rupp

Cascade Creek

Island

Patterson River

Frederick

River

Point Agassiz

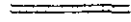
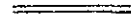
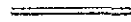


Muddy


Sound

ALASKA F. H. ROUTE 26

POINT AGASSIZ HIGHWAY

Legend:—

- Proposed New Construction 
- Proposed Reconstruction 
- New Construction Under Way 
- Reconstruction Under Way 
- Constructed 

To Be Dropped 

SCALE



19. Ibid.
20. Fairbanks Daily News-Miner, September 22, 1951.
21. Alaska Road Commission, Press Release, December 19, 1951, R. G. 30, Alaska Road Commission, box 65414, Federal Records Center, Seattle, Washington.
22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.

CHAPTER TWENTY

THE LAST YEARS OF THE ALASKA ROAD COMMISSION

As the foregoing chapters illustrated, the Departments of the Interior and Commerce conducted a complicated bureaucratic power struggle to determine which agency, the Alaska Road Commission or the Bureau of Public Roads, would assume total responsibility of road construction and maintenance in the Territory.

Bureaucratic Deadlock

Early in 1953 the Director of the Bureau of the Budget reported to President Truman on the bureaucratic deadlock. Since neither Interior nor Commerce had compromised, he recommended that both agencies in Alaska be continued. Should Alaska be admitted to statehood, the Director stated that "it would be desirable to have the Alaska Road Commission available for use by the new State as a highway department, and it would also be essential to have Bureau of Public Roads' assistance in Alaska...." Therefore, it would be unwise to "liquidate the Alaska Road Commission or to displace the Bureau of Public Roads for Alaska", although it was somewhat wasteful to have two federal agencies performing work which could well be accomplished by one. The president heeded the Budget Bureau's advice and informed the Secretaries of the Interior and Commerce that no major organizational changes were to be made. Truman hoped, however, that the two agencies, together with Territorial officials, prepare a program for future road construction in Alaska. Such a program Truman emphasized, should meet both civilian and military needs for the next five years.¹

Territorial Contributions Found Wanting

Unquestionably, the two agencies were to work out their jurisdictional problems. Perhaps of greater concern was the Territorial contri-

bution to the road construction and maintenance program. A. F. Ghiglione, the Commissioner of Roads for Alaska, perhaps best summarized the concerns of the Commission. He stated that the Alaska Road Commission had successfully coped with the Territory's rugged terrain and difficult climate since 1905. It had achieved much, but even more remained to be done. Southeastern Alaska needed a comprehensive ferry system, and although the Territory operated one leg in the summer months between Juneau, Haines, and Skagway, it needed to be extended. The Territory had to assume responsibilities for the construction of suburban and subdivision roads. Communities did not build beyond their corporate limits, therefore the commission had recognized the need for such roads and used farm road development funds to open areas around the cities. Further use of federal funds for such purposes was no longer possible, and the Territory had to assume responsibility for this vital link in the highway system.²

Territorial Legislature Should Impose Taxes

Ghiglione observed that large expenditures were required to assure Alaska's continued development. First of all, however, Territorial citizens and lawmakers had to recognize that they actively must participate in this process. This they did not do. In fact, Territorial citizens payed less than one-third the taxes for highway development purposes that every other American highway user paid. The average fuel tax in all the forty-eight states came to 5 cents per gallon. Alaskans continued to pay 2 cents per gallon. Additionally, the average vehicle registration fee for trucks and trailers in the contiguous states was twenty times higher than that charged in Alaska. Congressional appropriations committees recognized that Alaskans failed to carry their fair share of highway expenses, and Congress cut recent Alaska Road Commission budgets because of this factor. For example, the 1952 federal appropriation of \$18,149,624.11 had been drastically cut from a 1951 appropriation of \$29,389,476.14. In fact, members of the Congressional appropriation committee had threatened that unless Alaskans corrected this situation, future federal funding would be cut seriously. Ghiglione continued that

Alaska was far more dependent upon federal monies for highway development than any of the contiguous states. Many Alaskans had clamored for years to be included in the Federal-Aid Highway Act believing that this would bring more road construction funds. What most did not understand, he contended, was that such inclusion required substantial Territorial matching funds. Even if Alaska's highway user tax structure were revised to equal the average within the states, the total Federal-Aid Highway Act funds available on a matching basis would still be considerably less than what Congress annually appropriated to the Alaska Road Commission. Still, it was mandatory that the Territorial legislature make every effort to substantially raise Alaska's monetary contributions to highway construction and maintenance, Ghiglione concluded.³

Territorial Officials Recognize Problems

Territorial officials recognized the problem. Frank A. Metcalf, the Territorial Highway Engineer, echoed Ghiglione's concerns in his 1949-1950 and 1951-1952 biennial reports. In the former he pointed out that Alaskans paid less gas tax than any of the states except Missouri. An increase was urgently needed to help pay for the rapidly increasing demand for more roads and harbor facilities. In the latter report, he pointed out that between 1920 to 1940, the Territory contributed 11.7 percent of the total funds the Alaska Road Commission expended for road work. Between 1950 and 1952, the Territory's contribution of \$816,000 amounted to only 1.2 percent of the total. This limited Territorial contribution, he pointed out, made justifying federal expenditures for roads in Alaska very difficult. Echoing Ghiglione, Metcalf stated that in "recent years Congressional Committees have assumed the attitude that unless the Territory participates in its road program to an extent more comparable to that of the various states, further Federal appropriations will be greatly curtailed".⁴

Gradual Reforms

In his biennial report for 1953-1954, Irving Mck. Reed, the Territorial Highway Engineer and Superintendent of Public Works, also dealt with the problem of Territorial contributions. He stated that the legislature had gradually reorganized his office in intent, purpose, and composition in preparation for a more active participation through the construction and maintenance of roads, as well as water and harbor facilities. Mck. Reed noted that federal appropriations to the Alaska Road Commission exceeded by twenty times the Territory's expenditures for roads. He disagreed with Ghiglione in interpreting the Congressional mood. Mck. Reed argued that Congress really did not complain of the proportion of Federal-Territorial road funds, but rather criticized Alaskans for "not protecting the roads which the Government is building." He therefore proposed that the Territory discourage the transportation of overloads on Alaskan highways, operate truck weighing stations, increase the motor fuel tax, and add the receipts from the sale of license plates to the road fund.⁵

Alaska's Possible Inclusion In Federal-Aid Highway Act

Reed also dealt with Alaska's possible inclusion in the Federal-Aid Highway Act which provided for a long-range program of highway development with a very favorable ratio of federal-territorial matching funds. The apportionment formula was a complicated one, based on population, star route or rural mail delivery mileage, and the area of the territory included in the public domain. In 1953, federal officials told Reed that if Alaska was included in the program, the matching ratio would be about 86 percent federal and 14 percent Territorial monies. This arrangement looked tremendously advantageous for Alaska, because besides the large amount of federal funds coming to Alaska, the Territory could choose its road system and type of roads to be built, and the speed of completion and continuation of its road program would not be as dependent upon Congressional whims. There were disadvantages, however, and one of the

most important was that the Federal-Aid Highway Act required each state or territory to maintain, at its own expense, a highway department having adequate powers and being suitably equipped and organized to handle its responsibilities. The federal government did not pay for the cost of maintaining the central office nor the engineering organization of such a highway department, and no federal funds could be used for the maintenance of projects constructed under the provisions of the act. If Alaska, therefore, was to come under the provisions of the Federal-Aid Highway Act, Congress would probably abolish the Alaska Road Commission which handled all construction and maintenance of roads and highways with mostly federal monies. Under the Federal-Aid Highway Act, road construction was done only in cooperation with the Bureau of Public Roads. Furthermore, Congress undoubtedly would transfer all roads and highways built by the Commission and the Bureau to Alaska. In 1953, the cost of maintaining the Territorial road system cost about \$4,150,000 annually and Alaska only paid a minute proportion of that cost. These expenses were bound to increase with the expansion of the highway system. In case of a transfer, Alaska not only would have to assume total maintenance costs, but also face a tremendous initial investment in road equipment and machinery. Therefore, in case Alaska was included in the act, it would need to come up with about \$5,000,000 a year for supporting a highway department, equipment, and road maintenance. Only then could the Territory set aside funds to match federal monies. Reed concluded that "the Territory is unable to take advantage of the Federal-Aid Act."

Maintain Status Quo

Obviously, Territorial officials were as interested in maintaining the status quo as had been representatives of the Alaska Road Commission and the Bureau of Public Roads, if for different reasons. Although Territorial financial resources were slim, the Alaska legislature had always been reluctant to raise taxes for even the most basic governmental functions. In a fashion, the federal government had supported this reluctance to tax because it provided for most of the Territory's basic

governmental functions, which, besides highways and roads, a judicial system, and the management of fish and wildlife resources, to mention a few.⁶

Alaska Road Commission Becomes More Complex

In the meantime, the bureaucratic organization of the Alaska Road Commission continued to increase in complexity. By 1953, the Commission held an annual conference of district engineers, designed to discuss district as well as agency problems. In 1953, the Commission included assistant district engineers in view of the heavy workload in all districts, a result of the extensive improvement and paving program as well as considerable pioneer construction. The 1953 agenda included subjects such as the organization of the Commission, public relations, general topics, and the 1953 construction and maintenance program.⁷

Annual Meetings

As the first item of business, headquarters representatives handed district personnel the latest revised organizational chart, and explained that Commission charts were not fixed and were revised about every six months to meet changing situations and adjust to Congressional appropriations. The two major changes in 1953 involved the establishment of the Internal Audit Branch directly under the Commissioner of Roads in response to a 1952 General Accounting Office critical review. The other was the creation of an independent Safety Branch reporting directly to the Chief Engineer. There also was some discussion about staff relationships and communication between headquarters and district offices, with an emphasis on the necessity of coordinating efforts Territory-wide.⁸

Topics Discussed

Most conferees felt that the Commission did not need to "sell" itself. The best way to obtain public goodwill was to provide the best possible

highway with the available fund, and "to exercise courtesy of the road to the traveling public at all times." The headquarters staff also discussed the functioning of the new Internal Audit and Safety Branches at some length. Conferees also considered engineering problems, such as design, materials testing, and permafrost problems, personnel matters, supply and property, contracts, and operations. The two day conference ended on a mutual note of satisfaction that the conference had brought about a closer and more understanding approach to mutual problems.⁹

Summary of Accomplishments

In the summer of 1953, the Fairbanks Daily-News Miner requested program information from the Alaska Road Commission for inclusion in the paper's annual progress edition. Commissioner Ghiglione answered personally. He proudly reported that as of June 30, 1953, the end of the fiscal year, the Commission maintained a total of 3,422 miles of road. During the year, it had built 91 miles of new roads, improved 284 miles of primary highways to through road standards, and paved 137 miles. Of the total of 3,422 miles, 577 were paved, and the Commission maintained 1,711 miles to year-round traffic. During the 1953 fiscal year, the Commission had started work on the 170 mile long Copper River Highway, which, when completed, would provide interior Alaska with its fourth route to an ice-free, all winter port. Work continued on the 160 mile long Denali Highway which was to connect the second largest American National Park with the through highway network. The 160 mile long Taylor Highway was open to Eagle on the Yukon River, and a branch connected with the Canadian road to Dawson, Yukon Territory.¹⁰

Farm and Rural Roads

The farm and industrial road program had made some gains with 47 miles of new roads extending into the most promising farm, industrial, and mining lands in the Anchorage, Palmer, Kenai, Homer, and Fairbanks areas. The Commission maintained a traffic census which showed a substantial

increase over the entire interconnected highway system. Under construction were a new bridge across the Chena Slough at Fairbanks and an eight mile by-pass around the Military Reservation at Anchorage, both designed to relieve traffic congestion. The Commission had also maintained a vigorous traffic safety program during the year which included improved highway signs, centerline striping, safety patrols during extreme subzero temperatures, erection of guard rails, and strict limitation of highway loads.¹¹

Six-Year Plan

Ghiglione was happy to report that the six year accelerated highway program authorized in 1948 and started in 1949 would continue into 1954, although on a reduced scale. To date, more than \$100,000,000 had been expended on the programs since its start. He expected that Congress would appropriate approximately \$14,000,000, the lowest amount in recent years. Ghiglione observed that Congress had made good its threat to cut back on appropriations because the Territorial legislature had failed to pass the required highway revenue bills.¹²

Commission Plans

The Commission intended to complete the paving of the Richardson, Alaska, and Glenn Highways by 1955; complete the Taylor, Denali, and Copper River Highways by 1956; add another 40 miles of farm and industrial roads annually through 1960, and continue pioneer surveys for possible new routes, including the Livengood-Rampart and Skagway-Carcross projects. It might even be possible to build parts of these routes in the latter part of the six-year program. Ghiglione also had a wishlist - projects he wanted to see started. These included the start of new construction in 1954 on the Kasilof-Kenai-Sterling Highway; in 1955, the Fairbanks-Nenana, Livengood-Rampart, and Haines-Lutak Inlet; in 1956, the paving of the Sterling and Denali Highways and construction of the Pittman-Willow project; in 1957, paving of the Copper River, Nenana-Healy-McKinley

Park, Chitina-McCarthy roads Skagway-Alaska Highway, and the Copper River Highway-Bering River, and Georgetown Flat; in 1958, the Chilkat River bridge and road; in 1959, Seldovia-Yakalof Bay and Flax-McKinley paving; and finally in 1960 the improvement and paving of the Skagway-Dyea route.¹³

General Accounting Office Critical

While Ghiglione projected the future plans of the Commission, the General Accounting Office concluded its audit report of the agency and submitted it to Congress. Once again, the GAO recommended that the relationship between Federal and Territorial participation in highway construction, operation, and maintenance be reviewed and that the Alaska legislature should be prodded to contribute more funds toward these activities. Congress, for example, might consider limiting appropriations to a ratio based on cooperative Territorial funds. Under the existing apportionment formula used by the Bureau of Public Roads and applicable to the contiguous states, the share of federal aid for primary and secondary construction on a projection Alaska would be about 87 percent, while states usually paid all maintenance costs. The Alaska legislature also had so far failed to raise taxes and license fees for motor carriers to appropriate levels, and whatever little revenue the Territory derived from this source at present was partly diverted to other uses. Under those circumstances, Territorial contributions in recent years to the total amounts available to the Commission for construction and maintenance of roads had been about 1 percent in the last four years compared to approximately 12 percent from 1920 to 1940.¹⁴

Territorial Contributions Vague

Legislation covering Territorial contributions did not specify the amount of monies to be contributed by nor the nature of the cooperative programs with the Territory. Each year the head of the Commission and Territorial officials negotiated a basic cooperative program, which had primarily been confined to contributions for the maintenance of local and

feeder roads. For the last five years, the cooperative programs provided for the expenditure of the Commission's appropriated funds and Territorial contributions as follows:

Construction Year	ARC	Territory	Total
1949	\$371,000	\$215,000	\$586,000
1950	\$520,000	\$222,000	\$742,000
1951	\$589,000	\$250,000	\$839,500
1952	\$810,000	\$250,000	\$1,060,350
1953	\$902,000	\$250,000	\$1,152,700

In 1949, the Territory's share amounted to about 37 percent, and in 1953 it had declined to approximately 22 percent.¹⁵

Differences Between ARC and BPR

The General Accounting Office once again commented upon the differing construction standards of the Commission and the Bureau. The former's policy was to serve as great an area as possible in building pioneer roads to minimum standards and improve upon them when traffic warranted it. The latter built on the final location of the road in contrast to the Commission's initial construction of bulldozer trails which had little value when further improvements became necessary. The GAO once again recommended that Congress should review the necessity of maintaining the two separate federal road building and maintaining agencies in Alaska.¹⁶

ARC Business Losses

Other criticisms included losses incurred on mess operations, failure to recover full costs for work performed for other government agencies, the need to improve budgetary practices, accounting deficiencies, and employee housing. On the latter point, the GAO recommended that the Commission leave the responsibility for housing its employees to the Alaska Housing Commission. The GAO urged the commission to obtain specif-

ic authority to furnish supplies and services to Territorial agencies, such as the Alaska Departments of Education, Health, and Public Welfare, because these activities did not fall within the duties imposed by law upon the Commission. It also recommended that the Commission discontinue the practice of paying per diem allowances to temporary classified employees, because they did not incur the additional costs intended to be covered by these payments, and also strengthen its internal audit activities, accounting and fiscal procedures.¹⁷

Winter Maintenance Expensive

The GAO additionally reported that winter maintenance of Thompson Pass was very expensive. The cost for the 1952-1953 season amounted to \$201,661, or about 27 percent of the total cost of all winter maintenance. The average cost of keeping this 47 mile section of road open came to \$4,291 per mile. In 1953, the Commission had informed appropriate City and Territorial officials that it divested itself of maintenance activities with the corporate limits of the larger settlements. For example, the Commission notified the City of Fairbanks that it must assume full jurisdiction over the Cushman Street bridge, and that the Territory had to assume the full management of that portion of the Seward Peninsula Railroad tram lying within Nome's corporate limits. As of June 30, 1953 the Commission was responsible for 315 miles of local, isolated roads. Maintenance of these roads cost about \$117,000 in 1953. Although maintenance in these remote areas most of the time was not expensive, equipment had to be placed there. It remained there for years although little use was made of it, and in some instances pieces of equipment had been idle for years. Because of isolation, administrative control was difficult. Private citizens had often complained about Commission activities in these areas, relating to poorly maintained roads, construction and maintenance of roads for the benefit of one or a few individuals, and the improper use of Commission equipment and supplies for private purposes. The GAO reviewed one such example. Wiseman, a small settlement about 70 miles north of the Arctic Circle and about 200 miles northwest

of Fairbanks, had a population of about 300 individuals before World War II. With the decline of mining during and after the war, the population had dwindled to about 21 year-round and 6 summer residents. For several years the Commission maintained about 13 miles of road, and built another 4.5 miles. During 1953, the Commission spent about \$7,000 in maintenance. One air shipment of caterpillar parts and petroleum products weighing 26,930 pounds cost \$1,346. For all this expenditure, only two private vehicles used the road. Clearly, the amount of money expended was not commensurate with the number of people served.¹⁸

Continuing GAO Demands

After this report, representatives of the General Accounting Office kept up a steady stream of correspondence with the Commission, scrutinizing the smallest details. For example in November 1953, GAO noted that the Commission performed work on private property for private individuals, usually in exchange for materials utilized in road construction or improved rights of way. GAO wanted the Commission to furnish a reference to the authority relied on to 1) perform work on private property; and 2) exchange service for materials or rights of way without transfer of funds. Ghiglione replied that

The Act of June 30, 1921, 42 Stat. 90, as amended by the Act of June 30, 1932, 47 Stat. 446 provided that the "Secretary of the Interior [The Alaska Road Commission] authorized to receive from the Territory of Alaska, or other source, such funds as may be contributed by them to be expended in connection of construction, repair, and maintenance of roads, bridges, ferries, trails, and related works in the Territory of Alaska, and to cause such funds to be deposited to the credit of the Treasurer of the United States, and to expend the same in accordance with the purpose for which they were contributed (48USC 327).

Ghiglione Explains ARC Operations

Ghiglione explained that the Commission performed work for individuals under this authority. Frequently, however, it was advantageous to do this work on a barter basis because the individual in question might be able to trade necessary materials for such services but was unable to pay cash. Furthermore, at times it was possible to obtain rights-of-way advantageous to the government. The Commission maintained that it did not evade or circumvent the law but rather acted in a fashion profitable to the government. The GAO kept picking away however, and no sooner had Ghiglione answered an inquiry when another came. Again he had to consult the statutes. It took much time. Finally, he contacted F. M. Edwards, Jr., the Chief counsel of the Office of Territories and urged him to draft remedial legislation for the Commission designed to ward off the constant General Accounting Office inquiries. Ghiglione complained that it was "unfortunate that representatives of the General Accounting Office, in conducting site audits, must adhere completely to the letter of the law." As a result the Commission time and again had to try and explain "the authority by which we perform certain operations." In fact, "it begins to seem a bit ridiculous that the usual and ready explanation for operations, which, in the strictest sense, may be contrary to law, is that such operations are really in the best interests of the Government." The Commissioner of roads then enumerated the problem areas, such as contributions, barter for services, agreements with Territorial agencies, and the operation of messes. These practices had developed over many years, Ghiglione explained. Alaska's vast expanse, arctic and subarctic climate, and its economic structure required the greatest degree of cooperation between the Commission and the Territory in order to accomplish set goals.¹⁹

ARC and Its Accounting and Fiscal Procedures

Before the Office of Territories could act, the General Accounting Office released yet another report, this one dealing with the Commission's

accounting and fiscal procedures. Again, there was much criticism of Commission procedures.²⁰ What the General Accounting Office did not understand was that the Alaska Road Commission had developed procedures over many years which best suited Alaskan circumstances. As long as Congressional appropriations had been so miserly, nobody had bothered to scrutinize the Commission. As soon as Congress appropriated large amounts of money in 1949, the Commission had come under close observation. At that point, it was expected that the Alaska Road Commission, still operating in a raw frontier area, conform to federal standards applicable to the contiguous agricultural, urban, and industrial states.

Legalize ARC Procedures

In the spring of 1954, the Office of Territories had drafted a measure designed to put long established Commission practices on a legal footing. When Ghiglione received the draft bill, he told the Office of Territories that it had undergone so many drastic revisions that it was of little value to the Alaska Road Commission. Two years later, in January 1956, Ghiglione submitted a draft of a measure worked out within the Commission. Short and to the point, it authorized the Commission to accept funds and materials from the Territory and other sources for use, together and with federal monies, for the construction, repair, and maintenance of roads and bridges; to make agreements with Territorial agencies for the transfer of materials, supplies, equipment, and services; and furnishing food and lodging to employees of the Commission and credit payments received to the appropriations from which expenditures had been made. The Office of Territories redrafted the measure various times, but it already was too late for within a few months the Alaska Road Commission was to be absorbed by the Bureau of Public Roads.²¹

Territorial Legislature Revamps Highway Revenue System

In the meantime, the Territorial legislature revamped the highway revenue system in 1955. It raised the motor fuel tax on vehicles from

two to five cents a gallon, divided the revenues from the motor fuel tax into a highway and a water and harbor facilities fund and also changed the Territorial fiscal year from January to December 31 to July 1 to June 30 to conform with the federal fiscal year. After the legislature had raised the motor fuel tax, the Department of the Interior announced in June 1955 that it no longer would request the usual \$400,000 in its program for the construction of farm and access roads. It turned the program over to the Territory -- which had no choice but to accept it because these access roads were very important. The Alaska Road Commission, however, assured the Territorial Highway Engineer that it would continue in its maintenance all roads built by the Commission with Territorial funds.²²

ARC To Be Transferred to BPR

On August 17, 1956 the Departments of Interior and Commerce jointly announced that the Alaska Road Commission would be transferred, effective September 16, to the Bureau of Public Roads. This action became necessary when Congress placed Alaska under a modified section of the Federal-Aid Highway Act, to become effective on July 1, 1956.²³

Ghiglione Submits Last Annual Report

On August 31 of that year, Ghiglione submitted the last annual report of the Alaska Road Commission to the Office of Territories. He summarized the Commission's history of fifty-one years of service to Alaska. Until the start of the six-year program in 1949, the Commission had been a small, efficient organization handling a modest program of comparatively low standard road construction. The massive road construction program made it necessary to form around this small group of experienced Alaska road builders a modern highway organization. Despite the increase in specialized personnel, the Commission found it necessary to utilize the Bureau of Public Roads Alaska organization to meet survey, design, and contract administration deadlines. The staffing, climate, terrain, and

construction problems were formidable, but did not delay the start of the accelerated program. In fact, contractor's work forces often followed the Commission's engineering crews by only a few hundred feet. In 1956, eight years and \$170,000,000 later the program neared completion. The 1956 highway system consisted of 1,000 mile network of all-weather paved routes, connecting the ice-free ports of Valdez, Seward, and Haines with Alaska's principal cities and military installations, and with the contiguous States via the Alaska Highway through Canada. A secondary system connected farming and mining areas to the primary network. In addition, the system included 570 miles of isolated roads connecting inhabited areas with air, rail, or water transportation facilities.²⁴

Conclusion

Before the start of the new program in 1949, the Commission, in an effort to provide minimum transportation facilities for everyone, had built pioneer roads into every region of Alaska, constructed small airfields, a seaplane canal, operated ferries, and built and maintained portages and narrow gauge tramways. The labors of the Alaska Road Commission had contributed much to the development of the Territory. With Alaska's inclusion of the Federal-Aid Highway Act, a new era of road building began for Alaska.

Footnotes

1. Lawton to Truman, January 9, 1953, Truman to Secretaries of the Interior and Commerce, January 17, 1953, Truman papers, OF-65, OFG-BB Alaska Road Commission, Harry S. Truman Library, Independence, Missouri.
2. Ghiglione, "Highway Development For Alaska," January 7, 1953, R.G. 30, Alaska Road Commission, box 65638, Federal Records Center, Seattle, Washington.
3. Ibid., Alaska Road Commission, Annual Report, 1955, p. 47.
4. Biennial Report of the Alaska Territorial Highway Engineer and Superintendent of Public Works, 1949-1950 (Juneau, Alaska, 1951), pp. 8-9; Biennial Report of the Alaska Territorial Highway Engineer and Superintendent of Public Works, 1951-1952, (Juneau, Alaska, 1953), pp.5-6.
5. Biennial Report of the Alaska Territorial Highway Engineer and Superintendent of Public Works, 1953-1954 (Juneau, Alaska, 1955), pp.8-34.
6. Ibid., pp. 10-11.
7. Alaska Road Commission, "Summary and Digest of the Annual Conference of District Engineers, 1953," R.G. 30, Alaska Road Commission, box 65638, Federal Records Center, Seattle, Washington.
8. Ibid.
9. Ibid.
10. Ghiglione to Kennedy, July 15, 1953, R.G. 30, Alaska Road Commission, box 65415, Federal Records Center, Seattle, Washington.
11. Ibid.
12. Ibid.
13. Ibid.
14. The Comptroller General of the United States, Audit Report to the Congress of the United States, Alaska Road Commission, Department of the Interior for the Fiscal Year Ended June 30, 1953 (General Accounting Office, Washington, D.C.: August, 1953), pp. 6-7.
15. Ibid., p. 7.
16. Ibid., pp. 8-9.
17. Ibid., pp. 10-17.
18. Ibid., pp. 37-38.

19. Hirschhorn to Ghiglione, November 16, 1953, Ghiglione to Edwards, December 29, 1953, R.G. 30, Alaska Road Commission, box 65403, Federal Records Center, Seattle, Washington.
20. United States General Accounting Office, Division of Audits, Report on Review of Accounting and Fiscal Procedures of the Alaska Road Commission, Department of the Interior, for the Fiscal Year Ended June 30, 1953 (Washington, D.C., 1953).
21. Beasley to Lausi, May 20, 1954, Lausi to Ghiglione, June 21, 1954, Ghiglione to Lausi, July 1, 1954, Ghiglione to Lausi, January 4, 1956, Van Cleve to Office of Territories, February 3, 1956, R.G. 30, Alaska Road Commission, box 65403, Federal Records Center, Seattle, Washington.
22. Biennial Report for 1955 - 1956 of the Alaska Territorial Highway Engineer and Superintendent of Public Works to the Twenty-Third Territorial Legislature and Estimates of Receipts and Expenditures for the Period January 1, 1957 to June 30, 1959 (Juneau, Alaska. 1957), p. 2.
23. Joint Press Release, Departments of Interior and Commerce, August 17, 1956, R.G. 30, Alaska Road Commission, box 65403, Federal Records Center, Seattle, Washington.
24. Alaska Road Commission, Annual Report, 1956, p. 3. Following is a list of the various highways, roads, and trails as of June 30, 1956. Source, ARC, AR, 1956, pp. 26-28.

During the fiscal year the highway system was increased by 50.9 miles; 16.1 miles of Feeder roads and 34.8 miles of local roads; 26.2 miles of principal Feeder roads were improved to Through road standards and reclassified.

Following is a tabulation of the road system as of 1954, 1955, and 1956:

	<u>1954</u>	<u>1955</u>	<u>1956</u>
Through Roads	989.1	972.3	998.5
Feeder Roads	1,213.9	1,244.7	1,234.6

Local Roads:			
From Main Feeders	709.4	939.7	761.3
From Isolated Feeders	237.1	237.2	246.6
Isolated Feeders	<u>332.9</u>	<u>349.6</u>	<u>353.4</u>
Total Local Roads	1,279.4	1,326.5	1,361.3

Total - All Roads	3,482.4	3,543.5	3,594.4
Trails	<u>248.0</u>	<u>248.0</u>	<u>445.0</u>
Total Roads & Trails	3,730.4	3,791.5	4,039.4

Following is a current tabulation of highway system:

THROUGH ROADS

<u>Route No.</u>	<u>Name</u>	<u>Length</u>	<u>Winter Maintenance</u>
120	Richardson Highway (Valdez District)	227.3	227.3
130	Richardson Highway (Fairbanks District)	134.9	134.9
132	Fairbanks-International Airport	1.0	1.0
230	Alaska Highway	200.6	200.6
310	Glenn Highway (Anchorage District)	114.7	114.7
310A	Glenn Highway Alternate	7.5	7.5
311	Anchorage 4th Avenue Post Road	1.0	1.0
320	Glenn Highway (Valdez District)	162.2	162.2
330	Glenn Highway (Fairbanks District)	33.4	33.4
410	Seward-Anchorage Highway	36.9	36.9
411	Anchorage-Spenard	3.5	3.5
412	Anchorage-International Airport	3.0	3.0
510	Sterling Highway	10.9	10.9
514	Kenai Spur	14.3	14.3
630	Steese Highway (Fairbanks-Farmers Loop)	2.8	2.8
632	Steese Highway-University	3.8	3.8
950	Haines-Boundary and Spur to Haines	40.7	40.7

FEEDER ROADS

<u>Route No.</u>	<u>Name</u>	<u>Length</u>	<u>Winter Maintenance</u>
121	Edgerton Cutoff, Willow-Chitina	39.0	39.0
122	Copper River Highway	-	-
231	Northway Junction - Airfield	6.8	6.8
232	Gerstle River Test Site Road (Army)	3.6	3.6
312	Palmer-Matanuska-Wasilla	13.9	13.9
313	Palmer-Wasilla-Willow	30.7	30.7
314	Glenn-Fishhook-Knik	33.6	33.6
321	Slana-Nabesna	45.6	-
331	Taylor Highway	161.0	-
511	Sterling Highway	108.4	108.4
513	North Kenai Roads	16.3	16.3
631	Steese Highway-Farmers Loop-Circle	161.0	30.0
633	University-Ester	6.7	6.7
634	Central-Circle Hot Springs	8.3	-
731	Elliott Highway-Fox to Livengood	68.4	9.0
732	Manley Hot Springs Landing-Eureka	25.7	-
811	Denali Highway (Anchorage District)	82.0	-
812	McKinley Park Primary Roads	93.6	-
813	North Park Boundary-Kantishna	4.5	-
821	Denali Highway (Valdez District)	41.9	-
011	Sterling Landing-Ophir	47.0	-
012	Iditarod-Flat	8.7	-
013	Dillingham-Wood River-Kanakanak	14.7	14.7
014	Abbert Road	0.8	0.8
031	Ruby-Long-Poorman	56.5	-
041	Nome-Council	77.1	-
042	Nome-Kougarok	20.8	5.2
043	Seward Peninsula R.R.	58.0	-
044	Nome-Teller	-	-

Local Road Systems

	<u>Total Miles</u>	<u>Winter Maintenance</u>
Anchorage Locals	62.8	62.8
Glenn Highway Locals	91.7	60.7
Matanuska Valley Locals	139.1	80.3
Kenai Peninsula Locals	115.2	101.3
Kuskokwim Locals	68.2	3.0
Kodiak Locals	59.5	59.5
Alaska Railroad Feeder	94.2	19.0
Bristol Bay Locals	25.3	16.5
Iliamna Locals	28.5	---
McCarthy Locals	30.5	---
Richardson Highway Feeder System	84.8	62.9
Fairbanks Locals	37.5	35.5
Steese Highway Feeder System	136.4	35.6
Taylor Highway Feeder System	19.1	1.9
Elliott Highway Feeder System	9.5	---

	<u>Total Miles</u>	<u>Winter Maintenance</u>
Manley Hot Springs System	18.0	---
Yukon River Isolated System	31.7	---
Nome System	211.5	9.5
Haines & Skagway Locals	61.8	37.4
Southeast Alaska Roads	<u>36.0</u>	<u>36.0</u>
Totals	1,361.3	621.9

<u>Route No.</u>	<u>TRAILS</u>		<u>Winter Maintenance</u>
	<u>Name</u>	<u>Length</u>	
010.9	1 Goodnews Bay-Togiak	53.0	53.0
	2 Goodnews Bay-Platinum	9.5	9.5
	3 Takotna-Flat	18.5	18.5
030.7	Wiseman-Porcupine	18.0	-
040.5	1 Kotzebue-Shesholik	9.0	9.0
	2 Kotzebue-Noatak	60.0	13.0
	3 Kotzebue-Noorvik-Selawik	95.0	12.0
	4 Golovin-White Mountain	12.0	12.0
	5 Golovin-Moses Point	45.0	6.0
	6 Deering-Candle-Kiwalik	25.0	12.0
	7 St. Michael	5.0	5.0
	8 Teller-Cape Douglas	21.0	12.0
	9 Teller-Igloo Creek	22.0	6.0
	10 Teller-Mission	6.0	6.0
	11 Teller-Lagoon Channel	3.0	3.0
	12 Teller-Mary's Igloo	43.0	43.0

Traffic Statistics

Traffic density studies play an important part in the Commission's planning and programming. Data obtained at 47 permanent traffic count stations for identical periods each year are particularly useful in allocating maintenance funds, and for detecting changes in traffic patterns and characteristics.

Source, ARC, AR, 1956, pp. 26-28.

Appendix A
Members of the Board of Road Commissioners
for Alaska, 1905 to 1932

Presidents

Wilds Preston Richardson, Major, Colonel, and eventually Brigadier General in the National Army, June 16, 1905 to December 29, 1917.
William H. Waugh, Major, December 30, 1917 to April 14, 1920.
John C. Gotwals, Lieutenant-Colonel, April 15, 1920 to July 6, 1920.
James G. Steese, Major, later Colonel, July 7, 1920 to October 15, 1927.

Douglas H. Gillette, Major, October 16, 1927 to November 8, 1927.
Malcolm Elliott, Major, November 9, 1927 to July 20, 1932.

Presidents and Engineer Officers

William H. Waugh, December 30, 1917 to April 14, 1920.

James G. Steese, Colonel, March 27, 1924 to August 4, 1924.
By Departmental Order No. 585, date July 1, 1932, the Secretary of the Interior designated the ex officio commissioner for Alaska (the governor) to administer the duties relating to the road functions transferred to the Department under the act of June 30, 1932. On December 3, 1932, Departmental Order No. 605 amended the above order and provided that the activity carried on in the name of the board of Road Commissioners for Alaska be designated as the Alaska Road Commission. This made official a term which had come into use in the 1920s. The Commission form of organization ceased to exist and primary responsibility for its function was placed with one individual.

The Chief Engineer became the Chief Operative official of the Commission until July 31, 1948. In that year Congress approved a substantial road building program in Alaska for defense and economic development purposes. To carry out this expanded program the Acting Secretary of the Interior issued Departmental Order No. 2448 dated July 19, 1948, establishing a Commissioner of Roads for Alaska.

Chief Engineer

Ike P. Taylor, July 20, 1932 to July 31, 1948.

Commissioner of Roads for Alaska

John R. Noyes, Colonel, August 1, 1948 to June 30, 1951.

Angelo F. Ghiglione, July 1, 1951 to September 16, 1956.

Assistant Engineer

John Zug, Captain, December 30, 1917 to April 14, 1920.

Engineer Officers

George B. Pillsburg, Captain, May 15, 1905 to 1908.

F. A. Pope, Captain, 1908 to 1911.

Glen E. Edgerton, Captain, January 1911 to September 11, 1915.

Joseph C. Mahaffey, Mayor, July 1, 1917 to October 3, 1917.

William H. Waugh, Captain, October 4, 1917 to December 30, 1917, and
April 15, 1920 to July 6, 1920.

John C. Gotwals, Lieutenant Colonel, July 6, 1920 to March 26, 1924.

Lunsford E. Oliver, Major, May 21, 1924 to June 19, 1927.

James G. Steese, Major, June 20, 1927 to July 11, 1927.

Douglas H. Gillette, Major, July 12, 1927 to February 15, 1930.

Malcolm Elliott, February 16, 1930 to June 24, 1930.

Layson E. Atkins, Major, June 25, 1930 to July 20, 1932.

Secretaries and Disbursing Officers

Samuel C. Orchard, Lieutenant, March 1905 to 1911

Robert L. Weeks, Lieutenant, 1911 to August 26, 1913.

L. A. Kunzig, Lieutenant, August 26, 1913 to December 31, 1915.

Peter W. Davison, Lieutenant Colonel, July 1, 1917 to August 31,
1917.

Joseph C. Mahaffey, Major, September 1, 1917 to October 17, 1917.

John Zug, Captain, October 19, 1917 to January 18, 1918.

Sidney L. Carter, First Lieutenant, January 19, 1918 to June 30,
1921.

C. S. Ward, Captain, July 1, 1921 to May 2, 1922.

Aubrey H. Bond, Captain, May 3, 1922 to November 25, 1922.

Pierre A. Agnew, March 1, 1923 to January 31, 1925.

Harry E. Fisher, First Lieutenant, February 1, 1925 to 1926.

Frank A. Pettit, Second Lieutenant, 1926 to December 31, 1927.

Arleigh T. Bell, Second Lieutenant, January 1, 1927 to 1927

John R. Noyes, First Lieutenant, 1927 to March 31, 1928.

Emerson L. Cummings, Second Lieutenant, April 1, 1928 to November 30, 1928.

Emerson C. Itschner, First Lieutenant, December 1, 1928 to July 31, 1929.

Philip R. Garges, First Lieutenant, August 1, 1929 to January 31, 1930.

James G. Christiansen, First Lieutenant, February 1, 1930 to July 31, 1930.

Raymond B. Oxrieder, First Lieutenant, August 1, 1930 to January 31, 1931.

Leland B. Kuhre, First Lieutenant, February 1, 1931 to September 28, 1931.

Walter W. Hodge, First Lieutenant, September 29, 1931 to July 20, 1932.

Special Disbursing Agent

James G. Steese, Colonel, September 23, 1922 to February 28, 1923.

Military Assistants

C. W. Ward, Captain, May 3, 1922 to November 14, 1922.

Pierre A. Agnew, First Lieutenant, December 18, 1922 to February 28, 1923.

John C. Gotwals, Lieutenant Colonel, March 27, 1924 to April 26, 1924.

Lunsford E. Oliver, Major, May 2, 1924 to August 4, 1924.

Harry E. Fisher, Second Lieutenant, October 2, 1924 to November 1926.

Arleigh T. Bell, Second Lieutenant, September 28, 1925 to September 28, 1927.

Frank A. Pettit, Second Lieutenant, September 28, 1925 to March 27, 1928.

John R. Noyes, Second & First Lieutenant, November 9, 1926 to December 5, 1928.

Lunsford E. Oliver, Major, June 20 to June 21, 1927

Emerson C. Itschner, Second & First Lieutenant, August 22, 1927 to August 22, 1929.

Emerson L. Cummings, Second Lieutenant, August 22, 1927 to March 31, 1928.

Philip R. Garges, Second & First Lieutenant, April 4, 1928 to April 4, 1930.

Emerson L. Cummings, Second Lieutenant, December 1, 1928 to August 29, 1929.

James G. Christiansen, First Lieutenant, November 7, 1928 to July 31, 1930.

Leland B. Kuhre, Second & First Lieutenant, August 14, 1929 to January 31, 1931.

Raymond B. Oxrieder, Second & First Lieutenant, August 19, 1929 to January 1, 1931.

Emerson L. Cummings, First Lieutenant, December 1, 1928 to July 20, 1932.

Albert H. Burton, First Lieutenant, July 20, 1930 to July 20, 1932.

Walter W. Hodge, First Lieutenant, November 5, 1930 to 1931.

APPENDIX B

LAWS RELATING TO THE CONSTRUCTION OF ROADS IN ALASKA

May 26, 1900. An Act making appropriation for the support of the Regular and Volunteer Army for the fiscal year ending June thirtieth, nineteen hundred and one. (31 Stats., 214).

* * * * *

Transportation of the Army and its supplies; thirty million dollars; Provided, that one hundred thousand dollars of this sum may be used in Alaska, and shall be immediately available, for the construction of military roads and bridges in Alaska.

June 30, 1902. An Act making appropriation for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and three. (32 Stats., 507).

* * * * *

Transportation of the Army and its supplies; twenty-five million dollars; provided, that the balance of the appropriation of one hundred thousand dollars made by the Act of May twenty-sixth, nineteen hundred, for construction of military roads and bridges in Alaska remaining unexpended on June thirtieth, nineteen hundred and one, is hereby reappropriated, and made available for such construction; Provided further, That the number of draft animals purchased from this appropriation, added to those now on hand, shall be limited to such numbers as are actually required for the service.

April 23, 1904. An Act making appropriation for the support of the Army for the fiscal year ending June 30, 1905, and for other purposes. (33 Stats, at Large, 271).

* * * * *

For survey and estimate of cost of a wagon road from Valdez to Port (sic) Egbert on the Yukon River, to be made under the direction of the Secretary of War, twenty-five thousand dollars (\$25,000.00) to be immediately available; said survey and estimate, herein provided, shall be submitted to Congress at the earliest practicable day.

For surveying and locating a military trail, under the direction of the Secretary of War, by the shortest and most practicable route, between the Yukon River and Coldfoot, on the Koyukuk River, twenty-five hundred

dollars (\$2,500.00) to be immediately available, and a report and estimate upon said trail to be submitted to Congress at the earliest practicable day.

April 27, 1904. An Act to authorize the appointment of road overseers and to create road districts in the District of Alaska and for other purposes. (33 Stats., 391).

* * * * *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That it shall be the duty of the commissioner in each precinct in the District of Alaska, on the first Monday in the month of April in each year, to appoint a road overseer for the precinct in which he resides, and create a road district in the inhabited part of said precinct, which said district shall not include incorporated cities and towns.

To fill all vacancies in the office of road overseer in his precinct.

To cause a record to be made defining the boundaries of said road district.

Term of Office and Qualifications of Road Overseers

All road overseers shall hold office for one year and until their successors are appointed and qualified.

Every person appointed to the office of road overseer of any road district shall reside in the road district to which he has been appointed, and shall, within thirty days after he shall have been notified of his appointment, take and subscribe to an oath of office obligating himself to the faithful performance of the duties of his office, and shall forthwith cause such oath to be filed in the office of the commissioner of his precinct, and in case any such road overseer shall become non-resident of his road district, his office shall at once become vacant.

Each road overseer shall, before entering upon the duties of his office, execute a bond to the United States in a sum not less than double the amount of money which will probably come into his hands at any time during this term of office, with two or more sureties, the amount and sufficiency of the bond to be approved by the commissioner of the precinct, conditioned for the faithful discharge of the duties of his office, which bond shall be by him forthwith filed in the office of the commissioner and ex-officio recorder. The approval of such bond shall be indorsed thereon by the commissioner.

Duties of Road Overseer

The duties of road overseer shall be such as may be prescribed by law.

Each road overseer shall keep an accurate account of all money received by virtue of his office and the manner in which the same has been disbursed, and to whom, and shall, on the last Saturday of March in each year, exhibit such account, together with his vouchers, to the commissioner for adjustment and settlement. Such account shall be in writing, verified by affidavit of the overseer that the same is in all respects a full and true account of all money received by him during the full term for which he should make settlement and the amounts expended and the manner in which they were expended.

If any person appointed to the office of road overseer, unless unable from disease or other infirmity to discharge the duties of such office, shall refuse or neglect to serve therein, he shall be liable to a fine of twenty-five dollars; but no person so appointed who shall have served for a term next preceding such appointment shall be liable to such fine for refusing to serve if he shall have given notice in writing of refusal to the commissioner within twenty days after having been notified of his appointment.

Every road overseer who shall, after the expiration of his term of office, neglect or refuse to deliver on demand to his successor in office, after such successor shall have been duly qualified according to law, all moneys, records, books, papers, or other property appertaining to such office shall be liable to a fine of not less than fifty nor more than five hundred dollars.

Road overseers of the different precincts are authorized, and it is made their duty, to warn out all male persons between eighteen and fifty years of age who have resided thirty days in the District of Alaska, who are capable for performing labor on roads or trails, and who are not a precinct charge, to perform two days' work of eight hours each in locating, constructing, or repairing public roads or trails, under the direction of the road overseer within whose precinct they may respectively reside, or furnish a substitute to do the same, or pay the sum of four dollars per day for two days' labor, and said road overseer shall receipt for the same and shall expend it in location, construction, or repairs on the public roads and trails within his precinct; and any moneys so received and not expended shall be paid over to his successor in office, who shall expend the same as above provided.

The overseer of roads and trails in each precinct shall give notice to persons residing in his precinct liable to or charged with a road or trail tax of the time and place and the kind of work expected to be performed on the road or trail, and may direct what implement such persons shall bring with which to perform such work.

Whenever it shall happen, in consequence of sickness or absence from home, or any other cause, that the two days' work aforesaid shall not be performed within the time specified in this Act, the overseer shall be authorized to require the performance of such work at any time prior to the first day of October then next ensuing; and in case any person shall neglect or refuse to do the two days' work, or furnish a substitute, or pay in money the price of two days' labor, as provided in this Act, he shall be deemed guilty of a misdemeanor and shall be fined in the sum of ten dollars for each day refusing so to work upon conviction before any justice of the peace of the precinct.

If any person shall appear at the proper time and place as directed by the overseer and neglect or refuse to do a reasonable day's work according to his ability, he shall be liable the same as if he had neglected or refused to appear, or furnish a substitute, or pay the sum of money as provided herein.

Under the direction of the overseer, and at his discretion, the above road tax may be performed by one day's work, together with an able-bodied man, a two-horse team with wagon, or a dog team consisting of not less than five dogs and a sleigh, or a reindeer team of not less than two reindeer and sleigh or cart.

It shall be the duty of each road overseer to receipt to each person who performs labor on the public roads and trails of his precinct under the provision of this Act for the amount of labor so performed, and no person shall be compelled to pay road tax except in one precinct in the District to Alaska during one calendar year.

Each road overseer shall, on or before the first day of April in each year, report to the commissioner of the precinct the names of all persons subject to the two days' road tax for the preceding year, the names of those who have worked out said tax, the names of those who have paid the said tax money, and the names of those delinquent, and also all moneys received by him from all sources, and how expended, and the report shall be approved by said commissioner before any final settlement shall be made with such road overseer.

Each and every road overseer who shall neglect or refuse to perform the several duties enjoined upon him by this Act, or who shall, under any pretense whatsoever, give or sign a receipt or certificate for labor performed or money paid, unless the labor shall have been performed or money paid prior to the signing or giving of such receipts or certificates, shall forfeit for every such offense not less than five nor more than fifty dollars, to be recovered by an action before any justice of the peace within the precinct where such overseer may reside, and it is hereby made the duty of every United States attorney or assistant to prosecute all offenses against the provision of this Act not otherwise provided for.

Per Diem

Road overseers shall be allowed four dollars per day for all services required by this Act and actually performed in their respective precincts, to be retained out of money paid said road overseers from persons paying money or fines in lieu of two days' labor, upon the certified statement of the overseers, approved by the commissioner of the precinct; Provided, That no overseer shall receive pay for more than ten days in any one year, and not until he has made the return as provided in the preceding section, in duplicate, one copy to be retained by the commissioner and one copy filed with the clerk of the district court in the division in which the said precinct is situated.

Any oath required to be taken by said overseer, acknowledgement of bond, or the filing or recording of any paper or plat authorized by this Act shall be free of cost to said overseer.

Upon application of road overseers, it shall be the duty of the clerk of the district court to furnish copies of this Act and blank forms of notices warning persons to perform road work, receipts for road work, bond, and oath, and for overseer's report to commissioner, the expense of which shall be paid out of the fund for paying the incidental expenses of the court.

The Attorney General of the United States is hereby directed to furnish clerks of the district courts in the different judicial division of Alaska a sufficient number of copies of this Act and other road and trail laws that may now be upon the statutes relating to roads and trails in the District of Alaska for use of road overseers in each judicial division.

Repealed by Act December 16, 1930

January 27, 1905. An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the district of Alaska, and for other purposes. (33 Stats., 616).

* * * * *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That all moneys derived from and collected for liquor licenses, occupation, or trade licenses outside of the incorporated towns in the district of Alaska shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska fund" and to be wholly devoted to the purposes hereinafter stated in the District of Alaska. One-fourth of said fund, or so much thereof as may be necessary,

shall be devoted to the establishment and maintenance of public schools in said district; five per centum of said fund shall be devoted to the care and maintenance of insane persons in said district, or so much of said five per centum as may be needed; and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said district.

SEC. 2. That there shall be a Board of Road Commissioners in said district, to be composed of an engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the Army stationed in said district and to be designated by the Secretary of War. The said engineer officer shall, during the term of his said detail and appointment, abide in said district. The said Board shall have the power, and it shall be their duty, upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters of said district to any town, mining or other industrial camp or settlement, or between any such town, camps or settlements, therein, if in their judgement such roads or trails are needed and will be of permanent value for the development of the district; but no such road or trail shall be constructed to any town, or camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. The said Board shall prepare maps, plans, and specifications of every road or trail they may locate and lay out, and whenever more than five thousand dollars in the aggregate shall have to be expended on the construction of any road or trail, contract for the work shall be let by them to the lowest responsible bidder upon sealed bid, after due notice, under rules and regulations to be prescribed by the Secretary of War. The Board may reject any bid if they deem the same unreasonably high or if they find that there is a combination among bidders. In case no responsible and reasonable bid can be secured, then the work may be carried on with materials and men procured and hired by the Board. The engineer officer of the Board shall in all cases supervise the work of construction and see that the same is properly performed. As soon as any road or trail laid out by the Board has been constructed and completed they shall examine the same and make a full and detailed report of the work done on the same to the Secretary of War, and in such report they shall state whether the road or trail has been completely conformable to the maps, plans, and specifications for the same. It shall be the duty of said Board, as far as practicable, to keep in proper repair all roads and trails, constructed under their supervision, and the same rules as to the manner in which the work of repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expenses of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of the Treasury out of the road and trail portion of said "Alaska fund" upon vouchers approved and certified by said Board. The Secretary of the Treasury shall, at the end of each month, send by mail to each of the members of said Board a statement of the amount available of said "Alaska fund" for the construction and repair of roads and trails, and no greater liability for the construction or repair shall at any time be incurred by said Board than the money

available therefore at that time in said fund. The members of said Board shall, in addition to their salaries, be entitled to receive their actual traveling expenses paid or incurred by them in the performance of their duties as members of the Board.

SEC. 3. That the governor of the District of Alaska shall be ex officio superintendent of public instruction in said district, and as such shall prescribe rules and regulations for the examination and qualification of teachers, and shall make an annual report of the condition of the schools in the district to the Secretary of the Interior.

SEC. 4. That the common council of the incorporated towns in said district shall have the power, and it shall be their duty, in their respective towns to establish school districts, to provide the same with suitable schoolhouses, and to maintain public schools therein and to provide the necessary funds for the schools; but such schools when established shall be under the supervision and control of a school board of three members, consisting of a director, a treasurer, and a clerk, to be elected annually by the vote of all adults who are citizens of the United States or who have declared their intention to become such and who are residents of the school district. The members of said Board first elected shall hold their offices for the term of two, and three years, respectively, and until their successors are elected and qualified, and one member of such Board shall be elected each year thereafter and shall hold his office for a period of three year until his successor is elected and qualified; and they shall each, before entering upon the duties of their office, take an oath in writing to honestly and faithfully discharge the duties of their trust. In case a vacancy in the membership of said board occurs from death, resignation, removal, or other cause, such vacancy may be filled by a special election, upon ten days' notice, called by the remaining members of the board upon the petition of five qualified voters. All money available for school purposes, except for the construction and equipment of schoolhouses and acquisition of sites for the same, shall be expended under the direction of said Board, and the treasurer of said Board shall be the custodian of said money, and he shall, before entering upon the duties of his office, give his bond, with sufficient sureties, to the school district, in such sum as the common council may direct, and subject to its approval, but not less than twice the amount that may come into his hands as treasurer, conditioned that he will honestly and faithfully disburse and account for all money that may come into his hands as such treasurer. The said Board shall have the power to hire and employ the necessary teachers, to provide for heating and lighting the schoolhouse, and in general to do and perform everything necessary for the due maintenance of a proper school.

SEC. 5. That the clerk of the district court shall have the power, and it shall be his duty, in the division to which he is appointed, and establish by order in writing a school district at any camp, village, or settlement outside of the limits of any incorporated town, but such school district shall not embrace more than forty square miles of territory nor contain less than twenty resident white children between the ages of six and twenty years. The said petition shall specify as near as may be the location and boundary of the proposed school district, the number of people, the number of families, and the number of children between the ages

of six and twenty years, resident therein, and such other material facts as tend to show the necessity for the establishment of the school district. Said petition shall be signed by not less than twelve persons of adult age who are citizens of the United States or have declared their intention to become such and who reside within the boundaries of the proposed school district. If the clerk of the court is satisfied that it is necessary and proper to grant such petitions, he shall make an order in writing establishing the school district, describing the same and defining its boundaries, and he shall also in said order appoint three of the petitioners to supervise and give notice of the first election, and shall specify the time and place of the same. The original order shall remain on file in the records of the court, and a copy of the same shall be posted at three public places in the school district at least ten days before the election, and such posting shall be deemed a sufficient notice of such election. All persons qualified to sign said petition shall be qualified to vote at said election. The qualified voters of said school district shall at said election choose by plurality vote a school board of three members, consisting of a clerk, a treasurer, and a director, who shall, before entering upon the duties of their trust, each take an oath in writing to honorably and faithfully discharge the duties of their office. In case a vacancy in the membership of said Board occurs from death, resignation, removal, or other cause, such vacancy may be filled by a special election, upon ten days' notice called by the remaining members of the board upon the petition of five qualified voters. The treasurer shall be the custodian of the monies of the school district, and he shall, before entering upon the duties of his office, have given his bond to the school district with sufficient sureties, to be approved by the clerk of the court, and in such sum as he may direct, but not less than twice the amount of money that may come into his hands as treasurer, conditioned that he, the treasurer, will honestly and faithfully disburse and account for all the money that may come into his hands by virtue of his office. Said Board shall have the power to build or rent the necessary schoolhouse or schoolroom, to equip the same with the necessary furniture and fixtures, to provide fuel and light, to hire and employ teachers, and in general to do and perform everything that may be necessary for the maintenance of a public school. The members of said Board shall hold office for the term of one year and until their successors are elected and qualified. An annual election shall be held each year, after the first election, for the election of members of said Board. As soon as the members of said School Board have been elected and qualified, they shall send to the clerk of the court and file in his office a certificate of their election under the hand and seal of the judges or supervisors of the election, their oaths of office, and the bond of the treasurer, and the clerk of the court shall file said papers and carefully keep them as part of the files and records of his office, and he shall at once send to the governor of the District of Alaska a certified copy of said papers, together with a certified copy of the order establishing the school district, and the governor shall duly file and preserve the same. The said Board, as soon as they have complied with the requirements aforesaid, shall immediately report in writing to the governor the number of children in their school district between the

ages of six and twenty years that intend to attend a public school, and the wages per month for which a teacher can be obtained; and after a school has been opened and maintained they shall, at the end of each school term report to the governor in writing the length of the term, the wages paid the teacher, the total number of pupils in attendance, and the daily average of such attendance at such term. The governor shall assign and set apart to each school district established and organized under the provisions of this section assume, not less than three hundred dollars nor more than one thousand dollars, in proportion to the number of pupils in the district, for the construction and equipment of a schoolhouse, which sum shall be paid by the Secretary of the Treasury to the treasurer of the school district upon the order and voucher of the governor out of that portion of the said Alaska fund set apart for the establishment and maintenance of public schools. The residue of said portion of said fund, or so much thereof as may be necessary, shall by the governor be apportioned among the several school districts established under the provisions of this section in amount sufficient for each district to pay the wages of a teacher, together with the expense of fuel and light, for five months' school in each year. And the amounts so apportioned to each school district shall be paid to the treasurer for the district by the Secretary of the Treasury upon the order and voucher of the governor out of the said portion of said fund.

SEC.6. That the clerks of school districts in the incorporated towns shall, at the end of each school term, report to the governor in writing the length of the term, the wages paid the teacher, the number of pupils in attendance, and the average daily attendance during the term.

Sec. 7. That the school specified and provided for in this Act shall be devoted to the education of white children and children of mixed blood who lead a civilized life. The education of the Eskimos and Indians in the District of Alaska shall remain under the direction and control of the Secretary of the Interior, and schools for and among the Eskimos and Indians of Alaska shall be provided for by an annual appropriation, and the Eskimo and Indian children of Alaska shall have the same right to be admitted to any Indian boarding school as the Indian children in the States or Territories of the United States.

SEC. 8. That commissioners appointed by the judges of the district court in the District of Alaska, pursuant to existing laws, shall, as ex officio probate judges and in the exercise of their probate jurisdiction, have the power, and it shall be their duty, in their respective districts, to commit, by warrant under their hands and seals, all persons adjudged insane in their districts to the asylum or sanitarium provided for the care and keeping of the insane in their District of Alaska. No person shall be adjudged insane or committed as such, except upon and pursuant to the following proceedings, to wit: Whenever a complaint in writing is made by an adult person to a commissioner that there is an insane person at large in the commissioner's district, the commissioner shall at once cause such insane person to be taken into custody and to be brought before him, and he shall then immediately summon and impanel a jury of six male adults, residents of the district, to inquire, try, and determine whether the person so complained of is really insane. The members of said jury shall, before entering upon the discharge of their

duty, each take an oath to diligently inquire, justly try, and a true verdict render, touching the mental condition of the person charged with being insane. Before entering upon such trial the commissioner shall appoint some suitable person to appear for and represent in the proceeding the person complained of as insane, and in case there is a physician or surgeon in the vicinity who can be procured, the commissioner shall cause such surgeon or physician to examine the person alleged to be insane, and after such examination to testify under oath before the jury in respect to the mental condition of said person. The commissioner shall preside at said hearing and trial. All witnesses that may be offered shall be heard and shall be permitted to testify under oath in said matter, and after having heard all the evidence the said jury shall retire to agree upon a verdict, and if the jury unanimously, by their verdict in writing, find that the said person so charged with being insane as aforesaid is really and truly insane and that he ought to be committed to the asylum or sanitarium aforesaid, and the commissioner approved such finding, he shall enter a judgment adjudging the said person to be insane and adjudging that he be at once conveyed to and thereafter properly and safely kept in the said asylum or sanitarium until duly discharged therefrom by law. The commissioner shall thereupon, under his hand and seal, issue his warrant, with a copy of said judgment attached, for the commitment of said insane person to the asylum or sanitarium aforesaid, which warrant shall be delivered to the marshal of the division in which said proceedings are had, and shall direct said marshal to safely keep and deliver said insane person to said asylum or sanitarium, and the said marshal; for the service of process in connection with and the guarding and transportation of the insane, shall be compensated from the same source and in the same manner as in the case of prisoners convicted of crime. The commissioner, the jurymen, and the witnesses in said proceeding shall be entitled to the same compensation and mileage as in civil actions. And all the compensation, mileage, fees, and all other expenses and outlays incident to said proceedings shall be audited and allowed by the district judge of the division in which said proceedings are pending and had, and when so audited and allowed shall be paid by the clerk of the court in such division as the incidental expenses of the court are by him paid and from the same fund.

SEC. 9. That all Acts and parts of Acts inconsistent with this Act are, to the extent of such inconsistency, hereby repealed.

Approved, January 27, 1905.

March 3, 1905. An Act making appropriations to supply deficiencies in the appropriations for the fiscal year ending June 30, 1905 (sic), and for prior years, and for other purposes. (33 Stats. at large, 1225).

* * * * *

Engineer Department

Survey of wagon road from Valdez to Fort Egbert, Alaska: For a survey and estimate of cost of a wagon road from Valdez to Fort Egbert, on the Yukon River, to be made under the direction of the Secretary of War, five thousand seven hundred dollars and sixty three cents. (\$5,700.63).

Survey of military trail between Yukon River and Coldfoot, Alaska: For surveying and locating a military trail under the direction of the Secretary of War, by the shortest and most practicable route, between the Yukon River and Coldfoot, on the Koyukuk River, to be immediately available one thousand four hundred and thirty one dollars and fifteen cents. (\$1,431. 15).

May 14, 1906. Amendment to Act approved January 27, 1905. (34 Stats., 192).

* * * * *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section one of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January twenty-seventh, nineteen hundred and five, be, and the same is hereby, amended so as to read as follows:

SEC. 1. That all monies derived from and collected for liquor licenses, occupation or trade licenses outside of the incorporated towns in the District of Alaska shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska fund" and to be wholly devoted to the purposes hereinafter stated in the District of Alaska. One-fourth of said fund, or so much thereof as may be necessary, shall be devoted to the establishment and maintenance of public schools in said district; five per centum of said fund shall be devoted to the care and maintenance of insane persons in said district, or so much of said five per centum as may be needed; and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said district; AND PROVIDED FURTHER, That the clerk of the court of each judicial division of said district is authorized, and he is hereby directed, whenever considered necessary, to call upon the United States marshal of said judicial division to aid in the collection of said license monies by designating regular or special deputies of his office to act as temporary license inspectors, and it shall be the duty of said United States marshal to render such aid; and the said regular or special deputies, while actually engaged in the performance of this duty, shall receive the same fees and allowances

and be paid in the same manner as when performing their regular duties.

Sec. 2. That section two of said Act be, and the same is hereby, amended so as to read as follows:

SEC. 2. That there shall be a board of road commissioners in said district, to be composed of an engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the Army stationed in said district and to be designated by the Secretary of War. The said engineer officer shall, during the term of his said detail and appointment, abide in said district. The said Board shall have the power, and it shall be their duty, upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters of said district to any town, mining or other industrial camp or settlement, or between any such town, camps, or settlements therein, if in their judgment such roads or trails are needed and will be permanent value for the development of the district; but no such road or trail shall be constructed to any town, camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. The said Board shall prepare maps, plans, and specifications of every road or trail they may locate and layout, and whenever more than twenty thousand dollars, in the aggregate, shall have to be expended upon the actual construction of any road or section of road designed to be permanent, contract for the work shall be let by them to the lowest responsible bidder, upon sealed bids, after due notice, under rules and regulations to be prescribed by the Secretary of War. The Board may reject any bid if they deem the same unreasonably high or if they find that there is a combination among bidders. In case no responsible and reasonable bid can be secured, then the work may be carried on with material and men procured and hired by the Board. The engineer officer of the Board shall in all cases supervise the work of construction and see that the same is properly performed. As soon as any road or trail laid out by the Board has been constructed and completed they shall examine the same and make a full and detailed report of the work done on the same to the Secretary of War, and in such report they shall state whether the road or trail has been completed conformably to the maps, plans, and specifications of the same. It shall be the duty of said Board, as far as practicable, to keep in proper repair all roads and trails constructed under their supervision, and the same rules as to the manner in which the work or repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expenses of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of the Treasury, through the authorized disbursing officer of the Board designated by the Secretary of War, out of the road and trail portion of said "Alaska fund" upon vouchers approved and

certified by said Board. The Secretary of the Treasury, shall, at the end of each month, send by mail to each of the members of said Board a statement of the amount available of said "Alaska fund" for the construction and repair of roads and trails, and no greater liability for construction or repair shall at any time be incurred by said Board than the money available therefore at the time in said fund. The members of the Board shall, in addition to their salaries, be reimbursed in the sums actually paid or incurred by them in traveling expenses in the performance of their duties, and shall be entitled to receive their actual expenses of living while serving as members of said Board within the limits of the district and not stationed at a military post.

Approved May 14, 1906.

June 12, 1906. An Act making appropriation for the support of the Army for the fiscal year ending June 30, 1907. (34 Stats. at Large, 254).

* * * * *

For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provision of said Act, one hundred and fifty thousand dollars. (\$150,000.00).

June 20, 1906. (34 Stats., p. 316).

* * * * *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That the sum of \$35,000 be, and the same is hereby appropriated, out of any money in the Treasury not otherwise appropriated, for a reconnaissance and preliminary survey of a land route from the navigable waters of the Tanana River, at or near Fairbanks, to the vicinity of Council City, in the Seward Peninsula, Alaska, for a mail and pack trail along such route, such sum to be immediately available, and to be expended under the direction of the Secretary of War; report of said survey and reconnaissance to be made to Congress at the earliest practicable day.

Approved June 20, 1906.

March 2, 1907. (34 Stats. at Large, 1178).

* * * * *

For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformably to the provisions of said Act, two hundred and fifty thousand dollars. (\$250,000.00).

May 11, 1908. (11 Stats., 142).

* * * * *

For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January 27, 1905, and to be expended conformable to the provision of said Act, Two hundred and fifty thousand dollars (\$250,000.00) to remain available until the close of fiscal year 1910.

February 6, 1909. Amendment to Act creating Road Commission. (35 Stats. at Large, 601).

* * * * *

So much of the Act approved January 27, 1905, entitled "An Act to provide for the construction and maintenance of roads, establishment and maintenance of schools, and care and support of insane persons in the District of Alaska, and for other purposes," as provides that five per centum of the license monies collected outside of incorporated towns in the District of Alaska shall be devoted to the care and maintenance of such in such insane persons is hereby repealed, and such five per centum, or so for the establishment and maintenance of public schools in said district, under the supervision of the governor.

March 3, 1909. (12 Stats., 148).

* * * * *

For construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, establishment and maintenance of schools, and care and support of insane persons in the District of Alaska, and for other purposes," approved January 27, 1905, and to be expended conformably to the provisions of said Act, three hundred and fifty thousand dollars (\$350,000.00) to remain available until the close of fiscal year 1911.

March 23, 1910. (13 Stats., 302).

* * * * *

For the construction and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, establishment and maintenance of schools, and care and support of insane persons in the District of Alaska, and for other purposes," approved January 27, 1905, to be expended conformably to the provisions of said Act, one hundred thousand dollars (\$100,000.00), to remain available until the close of fiscal year ending June thirtieth, nineteen hundred and twelve.

March 3, 1911. (36 Stats., 1052)

* * * * *

Same wording as act of June 12, 1906 (34 Stats., 254) except beginning with amount appropriated.

. . . one hundred and fifty thousand dollars (\$150,000.00) to remain available until the close of the fiscal year ending June thirtieth, nineteen hundred and thirteen (1913; Provided, That hereafter the Secretary of War may, in his discretion, assign suitable retired officers of the Army to active duty as members of the Board of Road Commissioners for Alaska, and in the case of any officer so assigned the provisions of so much of the Act of Congress approved April twenty-third, nineteen hundred and four, entitled "An Act making appropriations for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and five, and for other purposes" as relates to the assignment of retired

officers to active duty shall apply.

The above extended to Alaska an act of April 23, 1904 (33 Stats., 264) which provided that "The Secretary of War may assign retired officers of the Army, with their consent, to active duty . . . and such officers while so assigned, shall receive the full pay and allowances of their respective grades.

War Department Act approved August 24, 1912.

* * * * *

Construction and maintenance of military and post road, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails in the District of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes" approved January twenty-seventh, nineteen hundred and five, as amended by the Act approved May fourteenth, nineteen hundred and six, and to be expended conformably to the provisions of said Act as amended, one hundred and twenty-five thousand dollars (\$125,000.00).

War Department Act approved March 2, 1913.

* * * * *

Construction and maintenance of military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails in the Territory of Alaska, to be expended under the direction of the Board of Road Commissioners described in section two of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January twenty-seventh, nineteen hundred and five, as amended by the Act approved May fourteenth, nineteen hundred and six, and to be expended conformably to the provisions of said Act as amended \$155,000; Provided, That not to exceed \$55,000 of this amount may be used by the Board of Road Commissioners for Alaska for the protection of the Signal Corps Building and terminal grounds of the Alaska Military Cable and Telegraph System.

March 3, 1913 (37 Stats., 728). An Act to provide assistance to persons in Alaska who are indigent and incapacitated through nonage, old age, sickness, or accident, and for other purposes.

* * * * *

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That section one of an Act entitled "An Act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the district of Alaska, and for other purposes," approved January twenty-seventh, nineteen hundred and five as amended by an Act approved May fourteenth, nineteen hundred and six, and as further amended by an Act approved February sixth, nineteen hundred and nine, be, and the same is hereby amended to read as follows:

SEC. 1. That all monies derived from and collected for liquor licenses, occupation or trade licenses, outside of the incorporated towns in the Territory of Alaska, shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the "Alaska fund" and to be wholly devoted to the purposes hereinafter stated in the Territory of Alaska. Twenty-five per centum of said fund, or so much thereof as may be necessary, shall be devoted to the establishment and maintenance of public schools in said Territory; ten per centum of said fund shall be, and is hereby, appropriated and authorized to be expended for the relief of person in Alaska who are indigent and incapacitated through nonage, old age, sickness, or accident, and all the residue of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said Territory; Provided, That the clerk of the court of each judicial division of said Territory is authorized, and he is hereby directed, whenever considered necessary, to call upon the United States marshal of said judicial division to aid in the collection of said license monies by designating regular or special deputies of his office to act as temporary license inspectors, and it shall be the duty of said United States marshal to render such aid; and the said regular or special deputies while actually engaged in the performance of this duty shall receive the same fees and allowances and be paid in the same manner as when performing their regular duties.

That at the end of each fiscal quarter the Secretary of the Treasury of the United States shall divide the amount of said ten percentum of said fund so received during the quarter just ended into four equal parts, and transmit to each of the four United States district judges in Alaska one of said equal amounts.

That each of said judges is hereby authorized to expend so much of the money received by him under this Act as may, in his discretion, be required for the relief of those persons in his division who are incapacitated through nonage, old age, sickness or accident, and who are indigent and unable to assist and protect themselves; Provided That each judge shall quarterly submit to the Secretary of the Treasury an itemized statement, with proper vouchers of all expenditures made by him under this Act, and he shall at the time transmit a copy of said statement to the governor of the Territory; Provided further, That any unexpended balance remaining in the hands of any

judge at the end of any quarter shall be returned to the Secretary of the Treasury of the United States, and by him deposited in the said 'Alaska fund' and the said sum shall be subsequently devoted first, to meeting any actual requirements for the care and relief of such a person as are provided for in this Act in any other division in said Territory wherein the amount allotted for that purpose has proved insufficient; and, second, if there shall be any remainder thereof, said remainder shall be devoted to the construction and maintenance of wagon roads, bridges and trails in said Territory.

Approved March 3, 1913.

April 27, 1914. (36 Stats., 366). An Act making appropriations for the support of the Army for the fiscal year ending June thirtieth, nineteen hundred and fifteen.

* * * * *

Construction, repair, and maintenance of military and post roads, bridges and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$125,000: Provided, That the accounting officers of the Treasury are authorized and directed to allow and credit in the accounts of First Lieutenant Robert L. Weeks, United States Army, the sum of \$1,340, disallowed against him on the books of the Treasury in accordance with a ruling of the Comptroller of the Treasury, dated March fourteenth, nineteen hundred and thirteen; and that hereafter any officer of the Army and member of said Board of Road Commissioners who is living with his family while serving as a member of said Board within the limits of the Territory of Alaska, and not stationed at a military post, shall be entitled to receive a per diem commutation fixed by the Board in lieu of "actual living expenses" as now provided by law; and this provision shall embrace the time during which any member of said Board shall have failed in the post to receive any allowance for expense of living by reason of the decision of the Comptroller of the Treasury above referred to, to the effect that said allowance could not be made to an officer living with his family.

W. D. Act approved March 4, 1915.

* * * * *

Construction, repair, and maintenance, military and post roads, bridges, and trails, Alaska: For the construction, repair, and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$165,000.

W. D. Act approved March 29, 1916.

* * * * *

Construction, repair and maintenance, military and post roads, bridges, and trails, Alaska: Construction, repair and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$500,000.

W. D. Act approved May 12, 1917.

* * * * *

For construction, repair, and maintenance, military and post roads, bridges, and trails, Alaska: Construction, repair and maintenance of military and post roads, bridges, and trails, Territory of Alaska, \$500,000, to remain available until June thirtieth, nineteen hundred and nineteen (1919).

Retired Officer on Active Duty. (40 Stats., 231).

* * * * *

That when Retired Officer of the Army, any portion of whose active servies was in the Corps of Engineers, are called back into active service they shall be eligible to fill any position required by law to be filled by an officer of the Corps of Engineers.

Approved June 15, 1917.

Appendix C

WORK PERFORMED DURING THE 1917 CONSTRUCTION SEASON

Southeastern District

Route 1 -- Prince of Wales Island Road (4.1 mile road. 6.8 miles trail).

The work of the year was confined to the wagon-road section, the greater part of which is planked. Worn planks were replaced and the remainder leveled where necessary. An extension of 200 feet at the western end of the road was constructed at a cost of \$2 per linear foot. The total expenditure was \$676.09.

Route 2 -- Juneau-Eagle River road (16 miles road, 14 miles trail).

A branch road 3,600 feet in length was constructed during the year, connecting the main road with the bridge previously built over Mendenhall River. The new road was graveled throughout its entire length at a cost of 15 cents per linear foot, and a 200-foot framed trestle crossing a tidal slough was constructed at a cost of \$3 per foot. The work of continuing this branch to Auke Lake is now in progress.

General maintenance on the main wagon road included increasing the depth of surfacing to enable it to withstand the heavy automobile traffic, clearing ditches, and replanking about 600 linear feet of bridges and culverts at a cost of \$1.50 per foot. A new bridge, consisting of one 50-foot pony-truss span and 50 feet of approaches, was built over Lemon Creek at a cost of \$650.

Route 3 -- Haines-Pleasant Camp Road (47.5

The year's work on this route was entirely maintenance and embraced resurfacing weak sections with gravel and repairing bridges and culverts. Gravel in place cost approximately 75 centers per cubic yard, the average haul being less than 3,000 feet. The total cost of all work averaged \$70 per mile.

Route 14 -- Sitka-Indian River Road (3.4 miles).

Approximately 3,000 feet of new road was constructed at a cost of \$1,300 in extending this route toward Sawmill Bay, and a small amount of work was done in protecting the piers of the Indian River bridge during high water.

Route 39 -- Juneau-Sheep Creek Road (3 miles).

The work of the year on this route consisted chiefly of widening the narrowest parts of the road and resurfacing it throughout the greater part of its length. Gravel in place cost \$1 per cubic yard, the average haul being about 1 mile. A 60-foot trestle bridge, destroyed by a snowslide during the winter, was replaced at a cost of \$600. The average cost of all work was \$1,864.80 per mile, the high cost being due to unfavorable weather conditions and the very heavy automobile travel over the road.

Route 40 -- Douglas-Gastineau Channel Road (2 miles).

A total of \$414.10 was expended for minor repairs to this road during the year.

Route 43 -- Petersburg-Scow Bay Road (.5 mile road, 1 mile planked trail).

Twenty-eight hundred feet of this road was graded during the year at a cost of \$2,285.70. The unusually high cost was due largely to the nature of the soil encountered, which was a blue glacial clay.

The completion of this road will be undertaken next year by the Forestry Service.

Route 44 -- Skagway Valley Road (2.5 miles).

The work of the year on this route was devoted chiefly to the construction of 2.5 miles of road extending north from the bridge previously built over the Skagway River. The new road is surfaced where gravel was available in the ditches. Some additional work was required during the year in protecting the bridge from damage by high water.

Route 45 -- Silver Bow Basin Road (4 miles).

This road extends from Juneau through the Silver Bow Basin to the Perseverance mine. It was constructed by the mining company, but was taken over by the Board in 1915. The work of the past year consisted of surfacing with gravel the softest parts of the road, cleaning ditches, and reconstructing 600 feet of planked roadway at a cost of \$1 per linear foot. The cost of gravel averaged \$1.25 per cubic yard.

The average cost of all work was \$571.42 per mile.

VALDEZ DISTRICT

(Mr. J. H. Ingram, Superintendent)

Route 4A -- Donnelly-Washburn Sled Road (55 miles).

The construction of temporary winter bridges on the Big Delta and Little Delta Rivers and a small amount of grading on approaches to streams not bridged comprised the year's work on this route. The bridges were constructed by contract, those over the Big Delta costing \$2 per linear foot, and that over the little Delta \$2.50 per linear foot.

Route 4B -- Valdez-Ernestine Road (63 miles).

Throughout a great part of its length this route is subject to attack by glacial streams, and its construction and maintenance have been difficult and expensive. The work of the past year has embraced the repair of damage caused by these streams, general maintenance, and improvements of substantial and expensive character.

The 3-mile section crossing the glacial moraine adjacent to Valdez has been built up to a grade above the highest stage of water, and the embankment protected by brush and rock revetment. Two men were kept on this section during the entire working season, and all threatened portions were strengthened before any serious damage could result.

Extremely high water in Lowe River during the late summer washed out short sections of the road at the head of Keystone Canyon and at the 5-mile post. The repair of these sections necessitated a considerable amount of rock work.

The bursting of glacial reservoirs at the source of a small stream near the head of Keystone Canyon twice destroyed a short section of the road and changed the channel of the stream, requiring the reconstruction of the section and the removal of the bridge to the new channel.

The usual maintenance work comprised the removal of slides and snow, cleaning ditches, repairing culverts and bridges, etc. In addition, about 3 miles of road was graded, and a total of 10,000 cubic yards of gravel surfacing placed. The cost of the gravel depended largely upon the length of haul but averaged approximately \$1 per cubic yard.

The average cost of all work on this route was \$688.34 per mile.

Route 4C -- Ernestine-Willow Creek Road (29.3 miles).

The work of maintenance and improvement was carried on over the entire route during the year and embraced cleaning ditches and removing slides and windfalls, repairing bridges and culverts, grading approximately 2 miles of road, and placing 1,300 cubic yards of gravel surfacing. The average cost of the work was \$383.22 per mile.

Route 4D -- Willow Creek-Gulkana Road (36 miles).

Work on this route during the year included grading about 2.5 miles of road, laying 1,100 linear feet of corduroy, cleaning ditches, and general repairs to the road and bridges. A maintenance crew of two men was employed on this route for the last six weeks of the year dragging the road and repairing culverts. The average cost of all work during the year was \$487 per mile, but the cost of maintenance should be materially less in the future, as the entire route is now in good condition.

Tazlina Bridge -- The Tazlina River bridge was in part reconstructed during the spring of 1917. As originally built, together with additions made necessary by changes in the main channel, this bridge, exclusive of approaches, consisted of three 75-foot spans, two 108-foot spans, and one 50-foot span. The 108-foot spans were constructed in 1906, and it was thought advisable to replace them and to repair the entire bridge. The work done was as follows: the two south 75-foot spans were raised 2 feet to conform to the elevation of the new part of the bridge. The 108-foot spans and the 50-foot span were demolished and the north 75-foot span was taken down and replaced by two 100-foot spans of the new standard type (Pratt combination trusses). The 75-foot span was reerected north of the 100-foot spans and the bridge continued northward to the bank by a 60-foot pony-truss combination span and 170 feet of pile trestle. The truss timbers and stringers of the new spans are Douglas fir; the remainder of the timber used in the bridge is Alaska spruce cut in the vicinity of the bridge site. Below is an itemized statement of the field cost of the bridge:

Material (steel, lumber, pile shoes, etc.)	\$5,870.57
Equipment	751.05
Freight	1,566.11
Subsistence	1,484.96
Forage and care of animals	560.15
Labor	8,214.63
Miscellaneous	51.64
Total	\$18,499.11

Route 4E -- Gulkana-Sourdough Road (21.5 miles).

This is a difficult section to maintain, as the soil is largely clay and mud, and there is but little gravel available within a reasonable distance. The work of the year was devoted to widening the clearing, where necessary, to allow the sun to reach the road, grading with a road grader about 3.5 miles previously ditched by hand, and general repairs. Further grading on this route is being carried on this season. Because of the soil conditions the road is given a higher crown than is usual, and it is thought that after completion of the grading it can be kept in fair condition by a small maintenance crew. The cost of the work done during the year averaged \$692.65 per mile.

Route 4F -- Sourdough-168 Milepost Road (18.2 miles).

In addition to ordinary maintenance, approximately 9 miles of road was graded with a road machine to a width of 24 feet. The clearing was widened to 60 feet along the greater part of this 9 miles, to allow the sun to reach the road. A small amount of gravel surfacing was laid at a cost of approximately \$2.25 per cubic yard, the high cost being due to the scarcity of gravel and the long hauls necessary.

Route 4G -- 168 Milepost-Delta River Road (38.8 miles)

The work of the year on this route consisted chiefly of ordinary maintenance, embracing the removal of slides, cleaning ditches, and repairing culverts. Approximately 2 miles of road was graded and 9,200 feet surfaced with gravel. A short pile bridge was built over the glacial stream near mile 202, and a dike 700 feet in length was constructed for the purpose of confining the stream to its present channel. The average cost of all work was \$306.72 per mile.

Route 4H -- Delta River-McCarty Road (73.4 miles).

The work performed on this route during the year embraced the removal of slides, repairing bridges damaged by high water, grading 2 miles with a grader, and surfacing 1 mile with gravel.

The bridge over the glacier stream near Miller's was lengthened by the construction of two 60-foot spans and 66 feet of approach. The added spans are of the new pony truss type, with steel lower chords and native timber compression members. The cost of this work, exclusive of freight, was as follows:

Material	\$1,714.10
Labor:	
Cutting and getting out timber	831.29
Whipsaw timber	416.10

Construction piers	506.30
Framing trusses	143.29
Erecting trusses	107.43
Placing floor system	206.15
Total	<u>3,924.66</u>

To confine this stream to its present channel, a dike 585 feet long and 5 feet high was constructed, with its upstream slope protected by a heavy layer of brush secured at the top to the dike and weighted with rock held in place by wire netting. The total cost of the dike was \$588.73.

Route 4I -- McCarty-Richardson Road (20.6 miles).

In addition to general repairs to the road between McCarty and Shaw Creek, the work of the year was confined chiefly to the ferry and bridges in the vicinity of McCarty.

A new ferry scow, 16 by 35 by 3 feet, was constructed of native whipsawed lumber, at a cost of \$778.95.

Improvements to the bridge over the north slough near McCarty included replacing the existing 30-foot span by a standard 60-foot pony truss span, reerecting the 30-foot span north of the new 60-foot span, and constructing 56 feet of pile trestle approach. The total cost of this work was \$1,027.97, exclusive of freight from Seattle.

A pile bridge, 204 feet in length, constructed over the middle of McCarty Slough, cost \$828.37.

Route 6A -- Willow Creek-Tonsina Road (24 miles).

The greater part of this route was graded with a road grader during the year. Culverts were repaired and new ones built where necessary; ditches were cleaned out and a small amount of gravel surfacing placed. During May and June of this year two maintenance men, with a dam, were employed in dragging the road, repairing culverts, etc. The cost of the year's work averaged \$328.27 per mile.

This route, which traverses naturally good soil, is now in good condition and should require little work in the near future outside of that performed by a small maintenance crew.

Route 6B -- Tonsina-Chitina Road (15 miles).

Ordinary maintenance work was done on this route, but the chief expenditure was devoted to improvement, which is expensive, because of the rugged and difficult country through which the road runs. The long grade leading to the Tonsina River Valley was widened and surfaced, involving the construction of 1,760 linear feet of cordu-

roy, costing 78 cents per foot, and the removal of 1,400 cubic yards of solid rock which was made use of in surfacing 5,570 linear feet of the road. Approximately 3,500 cubic yards of gravel surfacing was placed at an average cost of \$1.10 per cubic yard. In addition, ditches were cleaned, slides removed, culverts repaired, driftwood removed from the Tonsina River Bridge, and 1 1/2 miles of road graded.

The dike constructed last year above the Tonsina Bridge (see annual report for 1916, p. 11) was partly destroyed by high water during the summer of 1916. It was rebuilt and strengthened this spring, and has successfully withstood the high water and accomplished its purpose.

Chisana Trail -- this is the winter trail from McCarty, on the Copper River and Northwestern Railroad, to the Chisana mining district. The best route for travel varies from year to year, and the trail is marked each winter with temporary stakes. The staking last fall was done under the supervision of local parties, \$500 being expended by the Board and \$500 contributed by interested persons in the vicinity.

SOUTHWESTERN DISTRICT

(Mr. Anton Eide, Superintendent)

Route 10 -- Seward-Kenai Lake Road (14 miles).

The work of improvement on this route began in 1915 by the Territorial road commissioner was continued by the board during the past year. The first 3 miles were improved, and extensive new construction was undertaken between mileposts 3 and 7. A total of 4.4 miles were graded with the road grader, 0.8 mile graveled, 520 feet of bridges redecked, and 7 new culverts constructed. The work was greatly hampered by very heavy rains and high water. Unit costs of various classes of work were:

Clearing and grubbing (heavy), per acre	\$230.00
Grading, per linear foot	.12
Redecking bridges, per linear foot	2.50
Graveling, per linear foot	.10

Maintenance work during the spring, embracing the repair of washouts, surfacing soft spots, and dragging, cost \$1,339.60.

The reconstruction of the bridge over Resurrection River (annual report, 1916, p. 11) was completed during July. The three 75-foot

spans are of Douglas fir and the remainder of the bridge of native spruce timber. An itemized statement of the field cost is given below; freight on material obtained in Seattle is not included.

Material	
Piling	\$237.60
Fir lumber	693.40
Native lumber	659.40
Rods, bolts, etc.	600.00
Drifts bolts and spikes	105.50
Dynamite, fuse, and caps	33.00
Tools	10.00
Total	<u>\$2,338.90</u>

Driving piles:	
Rent of driver with fuel and oil	\$160.00
Labor	753.67
Planking and capping piers and lower approaches	330.00
Getting out stringers and caps for approaches	317.00
Framing and raising trusses	340.00
Placing stringer and decking	325.20
Placing hand and guard rails	107.40
Cutting and blasting out old trestle	50.00
Total	<u>\$4,722.18</u>

A 72-foot Howe truss span of native spruce was constructed over a stream near the Ole Martin ranch. The detailed cost was:

Getting out timber for crib abutments and lower chord	\$ 52.50
Constructing abutments	23.00
9,500 feet b.m. native lumber, at \$22 per M	209.00
Rods, bolts, and spikes	47.83
Framing and raising trusses	55.00
Placing decking and handrails	30.00
Total	<u>\$417.33</u>

Route 12 -- Mile 34 A.N.R.R.-Hope Road (31 miles road, 9 miles sled road).

The usual maintenance work on the wagon-road section included the widening of the road, cleaning ditches, redecking 420 linear feet of bridges at a cost of \$2.75 per foot, and general repairs. On the sled-road section a small amount of work was done, principally in removing windfalls. The total cost was \$4,526.35, of which \$524 was expended in repairing and protecting the road during the spring.

Route 19 -- Kern Creek-Knik Trail (86 miles).

During the summer of 1916, forest fires and landslides caused by excessive rains destroyed a large part of this trail along Turnagain Arm. The work of repairing this damage covered about 20 miles, and included removing slides, replacing and repairing bridges and culverts, clearing windfalls, and rebuilding cribbing. During the winter two men were employed on the Turnagain Arm section of the trail, repairing it, and keeping it clear of slides and dangerous accumulations of ice.

Upon completion of the new Government railroad from Seward to Matanuska the larger part of this route can be abandoned, but until the gap between Kern Creek and Anchorage is closed winter traffic over it will be very heavy.

Route 20A -- Knik-Susitna Trail (30 miles).

Route 20B -- Susitna-Rainy Pass Trail (127 miles)

Two hundred and fifty dollars was expended on route 20A during the year, chiefly in clearing windfalls and bridging small streams which are difficult to cross during the spring and fall.

Route 20C -- Rainy Pass-Tacotna Trail (130 miles).

Route 20D -- Tacotna-Kaltag Trail (145 miles).

No work done on these routes during the year.

Route 24 -- Miles 29 A.N.R.R.-Moose Pass road (29.5 miles).

The improvement of 14.5 miles of sled road to wagon road standards constituted the work of the year on this route. Grades were cut down, the road bed was widened and drained, culverts were constructed, and corduroy laid where necessary. The average cost of the work was \$592.64 per mile. The average unit costs were:

Clearing and grubbing, per acre	\$120.00
Ditching and grading, per linear foot	.07
Corduroy, per linear foot	.60

Route 32A -- Tacotna-Flat Creek Trail (87 miles).

No work was done on this route during the year.

Route 35 -- Knik-Willow Creek Road (34 miles).

General repairs were made to the entire route during the year.

A small amount of corduroy was laid, and a quantity of culvert timber was cut and hauled for future use on the section above timber line. One mile of new road was constructed to reduce a steep grade at mile 33.

A standard 60-foot pony truss bridge of native spruce was constructed over the Little Susitna River, replacing an old stringer bridge. The cost was as follows:

Material (steel and hardware, Seattle)	\$408.00
Cutting and hewing timber	478.80
Hauling steel, etc., to bridge site	70.00
Constructing and filling timber abutments	75.00
Framing and raising trusses and placing decking	280.00
Total	<u>\$1,312.13</u>

The freight on steel and hardware from Seattle is not included in the above total.

Extensive improvement work on this road is now in progress from Wasilla, where it crosses the new Government railroad, in order that it may better serve the growing needs of the Willow Creek mining district.

Route 35A -- Archangel extension (2 miles).

This route will connect mile 32 on the Knik-Willow Creek Road with the Archangel Creek Valley, where a number of lode mines are developing. The entire road will be above timber line, necessitating the transportation of all culvert material and wood for fuel from considerable distances, and thus increasing the cost. Total of \$1,003.50 was expended during the past year, and the work of completing the road is now in progress.

McDougall-Cache Creek Trail -- This trail leads from McDougall, on the Yentna River, to the Cache Creek placer mining district, a distance of approximately 30 miles, and was constructed by operators in the district. During September and October, 1916, a location for a wagon road following the same general route was made and a bridge 120 feet long was constructed over Cache Creek, at a total cost of \$1,329.15.

Travel to and from this district is dependent upon uncertain and slow, small boat service from Anchorage up the Susitna and Yentna Rivers. Upon the completion of the Government railroad a more suitable route will lead from some point on the railroad near Talkeetna overland to Cache Creek. A reconnaissance of this route is now being made, with a view to the probable construction of a sled road if a suitable location is found.

Palmer-Mile 26 survey -- During the late fall of 1916 a location survey was made for a road 8 miles in length from Palmer, on the Government railroad, to mile 26 on the Knik-Willow Creek Road, to serve a considerable number of farmers who have taken up homesteads along the proposed route. The cost of the survey was \$96.20. Construction of the road is now under way.

YUKON DISTRICT

(Mr. R. J. Sommers, Superintendent)

Route 4J -- Richardson Salchaket Road (30 miles).

Extensive improvement of that portion of the road between mileposts 312 and 330, except 1 mile, constituted the work of the year on this route. The road was straightened, widened to 30 feet, and graded with a road grader. A change in the location was made between mileposts 318 and 319, involving the construction of approximately a quarter of a mile of new road around a steep bluff. The old road at this point was located on the flat along the Tanana River, where it was subject to overflow during high water. Two other short relocations were also made, the road in each case being shifted from the flat to the hillside, where better soil and drainage could be obtained. Sixty-eight culverts were constructed at an average cost of \$20 each, and 560 linear feet of corduroy was laid at a cost of \$60 per foot. The average cost of all the work was \$1,955.95 per mile for the 17 miles improved.

Route 4K -- Salchaket-Fairbanks Road (40 miles).

Eighteen and a half miles of this road, from mile 352 to mile 370, were reconstructed during the year. The road was widened, straightened, and graded with a road grader; fills were made across small swales, and 8,470 linear feet of drainage ditch constructed. Sixty-one culverts, two 36-foot pony truss bridges, and seven 16-foot stringer bridges were built, and 4,050 linear feet of corduroy laid.

Owing to the continuous cutting away from the road near mile 357, a relocation was made between mileposts 353 and 360. The new location is 09.5 mile longer than the old road but it is on higher ground, with better soil conditions, and is well back from the river. This relocation also eliminated about 3 miles of narrow corduroy which is subject to overflow by the Tanana river during high water, and which could not be satisfactorily repaired except at great expense.

Average unit costs of the work were:
Clearing and grubbing to 30-foot width, per mile \$ 289.20

Grading, including small frills, per mile	1,289.36
Drainage ditches, per foot	.15
Corduroy, per foot	.60
Culverts, each	20.00
Bridges, 16-foot each	40.00
Bridges, 36-foot each	200.00

Route 5 -- Ester-Fort Gibbon Sled Road (148 miles)

The year's work on this route consisted of general repairs and maintenance. Slides, windfalls, and stumps were removed between the 12 and 49 mileposts and 4 bridges, ranging in length from 19 to 31 feet, were constructed, at an average cost of \$5 per foot, the high cost being due to the scarcity of suitable timber. Repairs to bridges near Hot Springs cost \$157. Seven bridges near Tanana, varying from 18 to 36 feet in length, were reconstructed with sawed lumber at a cost of \$858.78.

Route 7A -- Summit-Cleary Road (11 miles).

Route 7B -- Fox-Olnes Raod (13 miles).

Route 7C -- Summit-Fairbanks Creek Road (11 miles).

Route 7E -- Vault Creek Road (2 miles).

Route 7F -- Vault Creek-Treasure Creek Road (1.5 miles).

Route 7H -- Little Eldorado Creek Road (1.5 miles).

Route 7I -- Gilmore-Summit Road (6 miles).

These routes were maintained by the Territorial road commissioner for the fourth judicial division, and no work was done on them by the Board.

Route 7D -- Ester Creek Road (13 miles).

The work of the year on this route consisted of the improvement of 2,000 feet of the road on mile 3, where it traverses a mattress of decayed vegetable matter, or peat, several feet deep, for a distance of over 0.5 mile. Two thousand feet of corduroy was laid and covered, at a cost of 85 cents per foot. Four bridges, with an aggregate length of 89 feet, were built, at a cost of \$239.

During the present year the improvement of the road is being continued as far as the Government experimental farm.

Route 7G -- Fairbanks-Gilmore Road (13 miles).

The work done by the Board on this route was confined to the construction of a pile bridge over Noyes Slough to replace 70-foot Howe truss span, which collapsed. A part of the material from the old bridge was used in the new construction, and other material was furnished by the Territorial road commissioner, who also performed general maintenance work on the road.

Route 7J -- Fairbanks-Chena Hot Springs Trail (64 miles).

Route 7K -- Olnes-Livengood sled road (54 miles).

No work was done on these routes during the year.

Route 9 -- Rampart-Eureka Road (6.5 miles road, 21.5 miles sled road).

General maintenance work on this route was carried on during July and August, and included redecking 19 culverts and 3 bridges, the reconstruction of 2 bridges, aggregating 54 feet in length, and widening and repairing the road between the 6 and 10 mileposts.

Route 11A -- Eagle-O'Brien Creek Road (17 miles).

Route 11B -- O'Brien Creek-Fortymile Sled Road (30 miles).

Work on these routes during the year consisted of general repairs and maintenance. On the wagon-road section, culverts were rebuilt, bridges repaired, and one new bridge constructed, ditches cleaned and extended, and a small amount of gravel surfacing placed. Maintenance work on the sled-road section included the removal of rock slides, widening the road, and ditching some sections.

Route 11C -- Steel Creek-Jack Wade Road (2.5 miles).

Route 11D -- Canyon Creek-Walkers Ford Sled Road (10 miles).

No work done on these routes during the year.

Route 11E -- Eagle-Seventy Mile Sled road (20 miles).

A total of \$502 was expended on this route, chiefly in constructing three bridges, repair culverts and bridges, and ditching.

Route 15 -- Circle-Miller House Road (49 miles).

Annual maintenance work on 34 miles of this route was performed during the summer and included cleaning and constructing ditches, laying 1 mile of light corduroy, repairing damage caused by washouts, and redecking and repairing culverts and bridges. The average cost of the work was \$137 per mile for the 34 miles on which work was done.

Route 16 -- Chatanika-Miller House Sled Road (81 miles).

The year's work on this route consisted chiefly in repairing bridges and removing slides. Six bridges were repaired, and one new bridge 24 feet long was constructed. The total cost of the work was \$500.

Route 17 -- Fort Gibbon-Kaltag Trail (257 miles).

The temporary staking of this trail for the guidance of winter travel was done by contract, at a cost of \$300.

Route 17A -- Lewis Landing-Dishkaket Trail (108 miles).

Route 17B -- Nulator Dishkaket Trail (90 miles).

No work done on these routes during the year.

Route 22 -- Hot Springs-Sullivan Creek Road (9 miles wagon road, 6 miles trail).

The work of the year on this route was confined to the wagon-road section. Bridges, culverts, and corduroy were repaired, ditches were cleaned, and a small amount of new ditching was done. Grading was done on sections between Kemperville and Sullivan Creek where the road had settled and a grader could be used to advantage. The average cost of the work was \$127 per mile.

Route 23A -- Chatanika-Beaver Trail (120 miles).

Route 23B -- Beaver-Chandler Sled Road (25 miles).

Route 29 -- Fort Gibbon-Koyukuk Trail (100 miles).

No work was undertaken on these routes during the year.

Route 30 -- Hot Springs Land-Eureka Creek Road (32 miles).

The year's work on this route was confined to the section between the Landing and Hot Springs, and comprised laying 180 feet of corduroy, cleaning ditches, filling ruts, and repairing several small bridges and culverts.

Route 31 -- Salchaket-Caribou Creek Sled Road (46 miles).

No work was done on this route during the year.

Route 32B -- Iditarod-Flat Creek Road (8 miles).

Route 33A -- Otter Creek Towpath (22 miles).

Route 33B -- Summit-Otter Creek Road (6 miles).

The work of the year on these routes was devoted to maintenance on the main Iditarod-Flat Creek Road, with some improvements on the first 6 miles of that road. Bridges and culverts were repaired, 4,010 linear feet of corduroy laid, and 9,481 feet of road graveled. The total expenditure was \$4,500

Route 38 -- Ruby-Long Creek Road (19.5 miles road, 10.5 miles sled road).

The year's work on this route embraced repairs to the main street of Ruby, the maintenance and improvement of the 6 miles of wagon road previously constructed, and the improvement to wagon road standards of approximately 13.5 miles of sled road.

The extension of the road which forms the main street of Ruby (not an incorporated town) was reconstructed for a distance of 1,300 feet, or practically its entire length. The steep approaches at either end of the street were graded down and ditched and the entire street was surfaced with rock. Six culverts were constructed, the material for five of which was furnished by adjacent property owners. The total cost of this work was \$1,501.09.

From Ruby to milepost 6 extensive maintenance and improvement work was done. Sidehill cuts were widened, holes filled, corduroy repaired and renewed, and 240 linear feet of road surfaced with rock. The average cost of the work was \$466.84 per mile.

From the 6 milepost to a point 0.5 mile beyond the 19 milepost, a wagon road was completed, largely following the old sled road. The work was accomplished under very trying weather conditions, the rainfall throughout the summer being without precedent in the history of Ruby. This heavy rainfall greatly increased the difficulty of overcoming the miles of glacial muck formation traversed, and was chiefly responsible for the unusually high cost of the work.

In construction of the new road 183 culverts were constructed, 24,506 linear feet of corduroy laid, 46,603 liner feet of road graded and ditched, and two bridges having a total length of 298 feet built. The road varies in width from 16 to 30 feet, according to the formation of the ground. All of the culverts, with the exception of 12, were constructed of poles secured on the ground. Pole or brush corduroy was used, depending upon the timber available where required.

Average costs of the work were:

Clearing, grubbing, and grading, per linear foot	\$ 0.78
Corduroy, per linear foot	.90
Culverts, each	27.88
Bridges, per linear foot	1.81

A permanent cache or warehouse 16 by 48 by 10 feet, with a corrugated iron gable roof, was constructed near the 19 mile post for the storage of supplies, equipment, and forage, no building being available for the purpose along the entire length of the road. The cost was \$484.61.

Maintenance work during the past spring on the entire 19.5 miles of wagon road comprised thawing ice out of culverts, opening channels under bridges, and repairing damage done to the new road during the break-up. The soil in this region cuts very rapidly when the moss is removed, and it is subjected to the action of running water, and a large part of the corduroy was seriously threatened by cutting ditches. Where this was found to be the case, the inner sides of the ditches were thoroughly revetted with moss and so covered with earth. It is thought that in the future any damage from this source can be largely eliminated by leaving a wider berm -- at least 5 feet -- between the ends of the corduroy and the inner edges of the ditches, and this will be done. The cost of this spring work can not be given, as part of the expenditures had not been reported at the close of the period of this report.

Prior to last year the prevailing summer freight rate from Ruby to Long Creek was 7 cents a pound, the freight being hauled over ridges which in wet weather became almost impassable, horses often sinking to their bellies in the mud. At the present time light motor trucks are delivering freight in ton lots at the 20 milepost under favorable weather conditions, for 1 1/4 to 1 1/2 cents a pound and the rate to Long City when the road is complete will probably not exceed 2 to 2 1/2 cents per pound, the saving resulting directly from the road thus amounting to at least \$70 per ton.

The work of completing the road to Long Creek is now in progress. A further extension from Long Creek to Poorman, a distance of approximately 24 miles, is urgently needed, but its construction will be expensive and can not be undertaken by the Board with the funds now available or in prospect.

Route 32B -- Long Creek-Cripple Trail (60 miles).

The work of the year on this route embraced the construction of a 25-foot bridge over Ophir Creek, repairing the bridge over Monument Creek, and filling in washouts between the Solatna River and Poorman. The total cost was \$196.

Route 46 -- Kantishna Trail (75.75 miles).

This is a trail constructed during the past winter from the Thirty-mile Roadhouse, 26 miles from Nenana on the proposed route of the new Government railroad, to the Kantishna mining district. From the initial point to the Toklat River, 26 miles, an old Indian or prospectors' trail was followed. This trail was widened where

necessary, and tripods were placed at intervals of 200 feet in open country for the guidance of travel.

From the Toklat River to Diamond City, 37.75 miles, the work was entirely new construction. The trail was cleared for a width of 8 feet through all timbered sections, trees being cut close to the ground as the depth of snow permitted, and other obstacles to traffic removed. All open country was staked with tripods, and 10 permanent bridges, aggregating 315 feet in length, were constructed.

Between Diamond City and Glacier, the terminus of the route (12 miles), the location follows an old trail, which was widened and straightened where most necessary.

The work done during February and March of this year under the efficient supervision of Mr. Thomas Lloyd. The total cost was \$4,571.63.

Route 47 -- Coldfoot-Wiseman Sled road (11.25 miles).

This is a winter sled road from Coldfoot, the ordinary head of navigation on the Koyukuk River for light-draft boats, to Wiseman, which is the supply point for the Koyukuk mining district. Freight is landed at Coldfoot during the summer and a small amount is transported to Wiseman on small gasoline or poling boats or on horse scows. The greater part of the freight, however, is sorted at Coldfoot and hauled to Wiseman and the adjacent producing creeks during the winter.

Construction work was carried on during September and comprised clearing and grubbing over the entire distance, and the construction of 3 foot bridges, with a total length of 445 feet, and 18 wagon bridges, aggregating 384 feet in length.

The total cost of the work was \$5,000, or \$444.44 per mile.

Eagle-Circle Mail Trail -- A total of \$206 was expended on this trail during the year. The work consisted of grading approaches to streams and widening and clearing the trail between mileposts 6 and 10 and between mileposts 15 and 22 north of Eagle.

Bridge over Chena slough, Fairbanks -- The project for this bridge was described in the annual report for 1916 (p. 15). The superstructure is a 300-foot steel span, with Petit trusses, designed for a uniform live load of 50 pounds per square foot or for the two 8-ton motor trucks passing. The abutments are of concrete, each consisting of two columns with stepped reinforced footings, supported on piles. The columns are connected at the top by a reinforced concrete curtain wall. The north approach is a framed trestle 180 feet in length; the south approach constructed by the city of Fairbanks, is combined of earth fill and trestle.

Excavation for the abutments was commenced August 9, 1916, begin delayed until the date by the difficulty of securing proper lumber for the cofferdams, which were constructed at Wakefield sheet piling. Work on the south abutment, which was constructed first, was greatly hampered by a mass of brush and refuse extending to a depth of 15 feet below mean water level, through which the cofferdam and excavation had to be carried. As a consequence of the delays, cold weather set in before the north abutment could be completed, making it necessary to heat the concrete materials and to keep the abutment covered and heated until the concrete had thoroughly set.

The structural steel for the bridge reached Fairbanks on the last boat to arrive there during the open season of 1916, but seven eyebars were found to have been so badly damaged as to make their use inadvisable. Duplicate bars were ordered immediately, shipped by express to Seattle and thence by freight to Chitina, from which place they were hauled on sleds to Fairbanks, arriving only two days before they were needed in the erection.

Pile falsework was driven, braced, and capped before the freeze up. The usual falsework employed in the interior of Alaska is merely a trestle supported on the ice, but in this case the weight of the bridge and the fact that several sewers discharging hot water have their outlets near the bridge site made the use of piles advisable.

A wooden gantry traveler for erecting the trusses was framed and erected during the latter part of the February of this year. The cost of the traveler was considerably increased by the inability of local lumber dealers to furnish timbers of requisite size, which necessitated the use of many built-up members.

The erection of the trusses, starting at the north end was begun March 1. No unusual difficulties were experienced, although the greater part of the crew had had no previous experience in such work. The bridge was swung March 22 and opened to vehicular traffic on April 19.

The total net cost of the bridge was \$51,489.19. This was much greater than the first estimate, the increase being due to various causes, some of which, such as the necessity for replacing damaged I bars, the difficulty of excavating for the south abutment, etc., have been mentioned above. It was originally intended to construct the bridge during the winter of 1915-16, but the destruction by fire of the almost completed plans in July, 1915, caused the postponement of the project for a year, during which time prices underwent a considerable advance, making the cost of all structural materials greater than had been anticipated.

A detailed report of the cost has not yet been received; the general distribution was as follows:

Material	\$23,190.14
Freight	7,689.88
Equipment	839.67
Engineering and inspection	2,941.81
Labor	15,395.22
Hire and care of animals	1,250.03
Fuel and power	1,032.31
Miscellaneous	622.21
Total	<u>\$53,001.27</u>
Received from sales	1,512.08
Total net cost	<u>\$51,489.19</u>

NOME DISTRICT

(Mr. Daniel A. Jones, Superintendent)

Route 8 -- Nome-Council Road (approximately 82 miles; 57 constructed).

Maintenance work on the Nome-Fort Davis section included blasting the ice under bridges in the spring and resurfacing 3,300 feet of road with gravel. The Rocker Creek Bridge was repaired by constructing two new crib supports and replacing old stringers.

No expenditure was made on the Fort Davis-Cape Nome section, which, as noted in previous reports, was very badly damaged by the storm of 1913. The Territorial road commission is now engaged upon the reconstruction of this section.

Work on the Cape Nome section, which was reconstructed in 1915 by the Territorial road commission, consisted of removing slides, cleaning ditches, and constructing 1,575 feet of approaches to the new road at a cost of \$2,826.99

General maintenance and the construction of 6,945 feet of gravel-surfaced corduroy constituted the year's work on the Solomon-East Fork section. The total expenditure was \$5,041.23.

Maintenance of the Fox River-Council section, which is entirely corduroy, cost \$445.10 per mile.

The maintenance and operation of the Safety Ferry cost \$885.80, of which \$385.80 was expended for new cable and minor repairs to the scow.

The cost of maintaining and operating the Bonanza Ferry was \$537.70; of this amount, \$162.70 was for new cable and repairs to the ferry scow.

Route 13A -- Nome-Bessie Road (3.3 miles).

General maintenance on this route, including resurfacing 7,335 linear feet with gravel, cleaning ditches, and opening channels through the ice under bridges during the spring, cost \$696.97 per mile. In addition, 400 cubic yards of material in the fill over Dry Creek, washed out by high water, was replaced at a cost of 51 cents per cubic yard. The maintenance cost for the year was greater than usual, largely because of the heavy rains during the summer of 1916.

During June of this year 1,200 tons of freight were transported over this road, and the daily average freight movement throughout the year was approximately 30 tons.

Route 13B -- Bessie-Banner road (3.5 miles).

The work of the year on this route was confined to surfacing 2.3 miles with gravel, at a cost of \$3,797.07.

Route 13C -- Bessie-Little Creek Road (1.25 miles).

Route 13D -- Bessie-Dry Creek road (1.25 miles).

No work was done on these routes during the year.

Route 13E -- Dry Creek-Newton Road (0.33 miles).

Repairs to culverts on this road cost \$27.

Route 13F -- Nome-Osborne Road (4 miles).

General maintenance work on this route cost \$45.18 per mile.

Route 13G -- Grass Gulch Road (1.75 miles).

No work was undertaken on this route during the year.

Route 13H -- Center Creek Road (1.37 miles).

The cost of resurfacing 625 feet of this road with gravel was \$386.84.

Route 13I -- Nome River Road (5 miles).

The protection of this road during the spring break-up cost \$13.05 per mile. No other work was done during the year.

Route 13J -- Wonder-Flat Creek Road (2 miles).

General repairs and maintenance on this route cost \$178.05 per mile.

Route 13K -- Bessie-Buster Road (5 miles).

The work of the year on this route consisted of general maintenance and surfacing 1 mile with gravel 12 inches thick, at a cost of \$0.36 per foot.

Route 18 -- Kaltag-Solomo Trail (248 miles).

On the Topkok-Unalaklik section of this trail 2,818 permanent stakes, each 3 inches in diameter at the butt and 9 feet long, were cut and set. In addition the permanent stakes on 79 miles were repaired and reset where necessary and 4 1/2 miles of new trail cleared through timber. The total cost was \$961.85.

Route 21 -- Unalaklik-St. Michael Trail (approximately 65 miles).

The temporary staking of 18 miles on the ice between St. Michael and Klikitarick cost \$16. The remainder of the work embraced restaking 27 miles with permanent stakes and the construction of a light tram over the Golsovia River, at a total cost of \$381.40.

Route 25A -- Cripple River Road (13.5 miles, total A and B).

Route 25B -- Penny River Road.

Route 25C -- Nome-Wireless Road (0.25 mile).

No work was done on these routes during the year.

Route 25D -- Mouth of Center Creek Road (2 miles).

General maintenance and repairs on this road cost \$87.66 per mile.

Route 25E -- Submarine Paystreak Road (2.5 miles).

As originally built this road extended from near the mouth of Snake River for a distance of approximately 1 mile along the submarine paystreak. A total of only \$620.84 has been expended on it since its location, is being constructed from Snake River bridge to the submarine paystreak. This road will be designated by the same name and route number as the old road, which has been abandoned.

The work of the year consisted chiefly in the construction of fills leading to the Snake River bridge approaches, containing 1,460 cubic yard of material. A branch road 1,200 feet in length was also constructed from the west approach to a point near the mouth of Snake River. The total cost of all work was \$1,765.07.

Route 25F -- Anvil-Glacier Road (3 miles).

General repairs to this route included cleaning ditches and hauling 480 cubic yards of gravel surfacing. The average cost was \$395.85 per mile.

Route 25G -- Snake River Extension Road (3 miles).

The work of the year on this route embraced general repairs and the surfacing of 2,380 linear feet of road with gravel. A suspension foot bridge over Snake River at the mouth of Boulder Creek, having a span of 130 feet, and two 18-foot bridges over Sledge Creek were constructed at a cost of \$294.73. The material used was largely obtained from the old Snake River bridge.

Route 25H -- Otter Creek Road (1.25 miles).

No work was done on this route during the year.

Route 25 -- Sinrock Ferry.

The total cost of maintaining and operating this ferry was \$321.90, of which \$71.90 was expended for minor repairs to the scow.

Route 26 -- Candle-Candle Creek Road (5 miles).

The year's work on this route consisted of cutting and tying 3,382 fifty-pound bundles of willows, which were hauled and distributed along the road during the winter for use in constructing corduroy this year.

Route 27 -- Deering-Inmachuck Road (25 miles).

General maintenance covering the whole route, together with some new construction on the left bank of the Inmachuck River, eliminating seven crossings of the river, constituted the work of the past year. The center pier of the bridge over the lagoon near Deering had been undermined and was removed and replaced by piles. Eight new culverts were constructed, 0.5 mile of road graded and ditched, and 2,700 feet of corduroy laid and graveled.

Route 28 -- Dahl Creek-Candle Trail (140 miles).

The repair and replacement, where necessary, of permanent stakes throughout the entire length of the route cost \$1 per mile.

Route 37 -- Topkok-Candle Trail (141 miles).

Twenty-six miles of this route were restaked with permanent stakes and 3 miles cleared through timber, at a total cost of \$460.

Route 42 -- St. Michael-Kotlik Trail (approximately 70 miles).

Those portions of this route not on the ice were marked with permanent stakes, 40 to the mile. The work was done by contract and cost \$350.

Route 49 -- Davidsons Landing-Taylor Creek Road (40 miles; 24 constructed).

This road extends from the head of navigation on Marys River to Taylor Creek, in the Kougarak mining district. Only light construction work was undertaken, covering the first 24 miles of the route, and consisting of clearing out the road, eliminating creek crossings by grading, and laying gravel-surfaced willow corduroy over soft spots. Since the work was done teams have been able to haul loose loads 1,500 pounds greater than the average before the improvement was made.

Marshall Road -- This road when completed will extend from a tributary slough of the Yukon to the placer mines of the Marshall district and will be about 3 miles in length. The work done during the past year consisted of cutting and hauling poles for approximately 2 miles of corduroy. Only a part of the accounts covering this work have been received, and the total cost can not be reported.

This project has been taken over and will be completed this year by the Territorial road commission.

Flagging trails -- Approximately 550 miles of trails, in addition to those permanently marked, were temporarily staked or flagged for the guidance and safety of winter travel. The total cost, including cost of inspection trips by the superintendent of the district, was \$4,225.30.

Snake River Bridge -- The construction of this bridge (see annual report 1916, p. 18) was begun June 17 and completed August 19, 1916. Nearly all of the material used including piles, lumber, and steel, had to be obtained and shipped from Seattle, largely increasing the cost. The two 100-foot spans are of the combination Pratt truss type. All truss timbers, stringers, and planks are Douglas fir.

The total cost including the expenditure reported last year, was \$16,949.93, distributed as follows:

Material	\$5,646.72
Equipment	400.21
Freight on material and equipment	3,441.65
Engineering	600.00
Labor	6,188.39

Hire of animals	453.31
Miscellaneous (fuel, telegraph, etc.)	220.25
Total	<u>\$16,949.93</u>

Of the above amount \$526.50 was expended during the winter in protecting the piers by cutting away the ice and placing riprap around them.

SOURCE: War Department. 1917. Annual Report of the Board of Road Commissioners for Alaska, 1917. pp. 17-34.

Appendix D

RECONNAISSANCE SURVEY - FORT GIBBON (TANANA) TO KOYUKUK AND KOBUK RIVERS TO KOTZEBUE, 1923-1924

The purpose of this survey report in the winter of 1923-24 was to obtain information on the route for possible improvements of the trail and erection of shelter cabins. It was an old established trail, and of great use in access to the upper Koyukuk and Kotzebue area on the coast.

The trail extended north to Allakaket, Bettles, Coldfoot, and Wiseman, a distance of 180 miles. From Allakaket it branched off westward to Kotzebue, via the Alatna and Kobuk Rivers to Shungnak, Kiana, and Kotzebue, 280 miles.

The snowfall in the vicinity of Alatna was very light at the time of arrival at that place. The Christmas holidays brought the natives to the Mission of St. John in the wilderness at Allakaket on the Koyukuk, near the mouth of the Alatna River. This gave me an opportunity to select a suitable guide from among the Kobuk natives. After having all the arrangements made for the trip, taking ten days supplies and dog food, I proceeded with Napoleon, the Kobuk guide, January 7th along the Alatna River, taking advantage of the portages, to Blackjack, a Kobuk village, where we stayed at Chief Nulyook's place for the night. From Blackjack the river was used, making short cuts across the portages of the many bends in the river. A 7 x 7 tent was used for camping out as there are no cabins along this route of travel. We had already resorted to the use of snow shoes to break trail for the dog team, the snow being heavier towards the Endicott Range. A blizzard from the northeast compelled us to seek shelter in a spruce grove, where we pitched camp for the night. It snowed during the night and the wind was getting stronger. Nothing was visible for more than a half a mile, but having worked out a compass course, Napoleon and I started to break trail and mark the same to the Hogotza, locally called the Hog River. For the next two days we were breaking trail and found faint traces of old blazes but the snow had driven so hard that the bark of the trees was covered with snow. The line of blazed trees corresponded to the compass course and the same was followed for three hours, returning to camp at dusk. Only two days dog food was on hand and our food supply was getting low; I decided to return to Marsan to replenish our supplies. On the return trip we met a Fur warden from Nome with three dog teams and two natives as guides and trail breakers. Later in the day we met a Kobuk trapper and we camped at this tent for the night. Leaving the tent next morning, we traveled the Alatna River. The cold was severe, the nostrils and mouths of the dogs were getting iced. We made Pooto Hope's cabin, stopped for the day (63 degrees below zero). The next day we returned to Marsan and after replenishing our supplies, engaged Nictune, native, to return with us to haul dog food. Leaving Marsan on the 28th of January, the Kobuk was reached on February 1st, made camp about two miles above Reed River (temperature 52 degrees below

zero). Next day passed Reed River and Beaver Creek, at the mouth of Reed River overflow was concealed beneath the snow, got feet wet and sled runners iced. The faces of the dogs and the front of our parkas were frozen so made camp at 3 P. M. During the night Napoleon and Nictune had to make a fire in order to keep warm (69 degrees below zero). In the course of next morning's travel, both natives had their cheeks and chins frost bitten. We pulled in at a white trapper's cabin, below Selby Creek, where we had lunch. Here we learned that distemper was raging among the dogs along the Kobuk River and that many had died of the disease. Stayed overnight at Pah River, where three Kobuk igloos are located. Proceeded next morning on Kobuk River, arriving at Shungnak on February 4th at 5 P.M. We put up at the store which has a sawmill and mining enterprise also. The eight days following, the weather remained 51 to 70 degrees below zero. During this time made a trip to the native village 7-1/2 miles below Shungnak, where the Bureau of Education maintains a school, presided over by two teachers who also look after the reindeer herds in behalf of the Government. Owing to the epidemic of distemper among the dogs, the scarcity of dog food and the extreme cold, I decided not to go on to Kotzebue and went to Noorvik, where I wired Fairbanks to that effect. Left Marsan February 28th over the winter trail for Nolan and arrived at Henshaw Cabin at 5 P.M. The trail was drifted in many places. Proceeded next day to Chinoko Cabin. At this place I met two Koyukuk natives who were hauling dog food for the Geological Survey. Next day I arrived at Bettles and had a meeting with the miners and residents and talked over trail matters. Proceeded on to Coldfoot and 2-1/2 miles below Coldfoot, where Porcupine Creek flows into the Koyukuk -- a heavy overflow, 18 inches deep, was encountered. Cutting a way around, I arrived at Coldfoot at 1:30 P.M. Had Lunch with Mianano, a Japanese, then proceeded to Wiseman and on to Nolan, it being the center of mining activities in the district, 6 miles from Wiseman. A meeting was held there and also at Wiseman to talk over trail and road matters. There seems to be more prospecting and development on the Upper Koyukuk than there has been for some time past. On Nolan Creek, 16 men in 3 outfits, were taking out winter dumps from shafts, others were working on benches. There was considerable working ground, but the water for sluicing was and had been a drawback. Two men were sinking a shaft on Alte Creek, 2 men and 1 woman on Emma Creek, 2 men on 12 Mile Creek, 5 men and 1 woman on Porcupine Creek, 5 men on Tramway Bar, 2 men on California Creek, 1 on Bettles River, 10 on Hammond Creek and 1 on Union Gulch. Four men were mining on Wild and 3 on John River.

The question of transportation and cost of supplies was foremost. Freight from Nenana to Bettles was \$90.00 per ton by boat, owned by the operating stores who handled mostly their own goods.

Leaving Wiseman on March 10th, I arrived at Nenana on March 26th, having covered 1,350 miles, of which 700 miles were traveled on showshoes.

The money spent in former years for the improvement of trails, roads and shelter cabins north of the Yukon has been, in many cases, misapplied

or wasted, either by having incompetent persons directing the work or others who directed the work for selfish purposes.⁵⁹

Source: Valdez Trail Collection, University of Alaska Archives,
Fairbanks, Alaska

APPENDIX E

Summary of All Expenditures to June 30, 1933

The Commission has expended the following funds since the beginning of road and trail development in the Territory:

Fiscal year	Congressional appropriations	Alaska fund	Other funds	Total
1905.....	\$-----	\$28,000.00	\$-----	\$28,000.00(1)
1906.....	118,172.09	57,420.77	-----	175,592.86(1)
1907.....	197,930.91	148,814.79	-----	346,745.70(2)
1908.....	244,857.18	120,772.72	-----	365,629.90(2)
1909.....	236,674.97	146,971.92	-----	383,646.89(2)
1910.....	237,498.50	102,898.29	-----	340,396.79(2)
1911.....	100,000.00	166,777.95	-----	266,777.95
1912.....	150,103.58	167,302.49	-----	317,406.07
1912.....	-----	17,052.23(3)	-----	17,052.23
1913.....	125,010.91	228,117.56	-----	353,128.47
1914.....	153,174.43	170,638.37	-----	323,862.80
1915.....	126,852.28	157,915.84	-----	284,768.12
1916.....	165,011.73	135,708.89	-----	300,720.62
1917.....	500,031.75	76,716.15	-----	576,747.90
1918.....	325,000.00	272,020.18	145.20	597,165.38
1919.....	246,651.95	52,372.31	-----	299,024.26
1920.....	132,426.73	124,992.96	101,184.56	358,604.25
1921.....	350,000.00	218,247.21	98,551.98	666,799.19
1922.....	426,807.34	173,029.19	83,411.15	683,247.68
1923.....	555,613.67	34,398.23	150,070.59	740,082.49
1924.....	730,423.17	67,683.67	138,000.81	936,107.65
1925.....	775,665.02	168,518.01	194,164.61	1,138,347.64
1926.....	1,013,577.53	115,035.11	182,705.05	1,311,317.69
1927.....	889,443.65	207,909.20	119,814.04	1,217,166.89
1928.....	860,192.90	134,593.11	258,882.17	1,253,668.18
1929.....	997,297.64	134,371.66	315,494.61	1,447,163.91
1930.....	775,406.36	138,542.03	342,401.26	1,256,349.65
1931.....	751,366.08	202,547.78	334,359.60	1,288,273.46
1932.....	710,738.05	68,270.32	260,022.41	1,039,030.78
1933.....	448,777.90	162,310.04	83,948.22	695,036.16
Total	12,344,706.32	3,999,998.98	2,663,156.26	19,007,861.56

(1) to Oct. 31.

(2) to Sept. 30

(3) U. S. Treasury adjustment.

"Other funds" in the foregoing table include the following expenditures from other appropriations:

Fiscal year	Increase of Compensation Acts	Quartermaster General	Funds Contributed	National Park Service
1918.....	\$145.20	-----	-----	-----
1920.....	-----	-----	\$101,184.56	-----
1921.....	940.00	-----	97,611.98	-----
1922.....	4,322.09	-----	79,089.06	-----
1923.....	28,857.73	-----	121,212.87	-----
1924.....	45,675.36	-----	92,325.45	-----
1925.....	15,136.08	\$300.00	98,708.53	\$80,020.00
1926.....	-----	290.17	132,414.88	50,000.00
1927.....	-----	812.00	103,001.10	16,000.94
1928.....	-----	792.83	198,089.34	60,000.00
1929.....	-----	1,000.00	249,494.61	65,000.00
1930.....	-----	1,499.80	180,080.15	160,821.31
1931.....	-----	937.47	165,604.86	167,817.27
1932.....	-----	2,324.83	161,459.79	96,237.79
1933.....	-----	-----	6,698.71	77,249.51
Total.....	95,076.45(1)	7,957.10	1,786,975.89(2)	773,146.82(3)

- (1) Includes refunds of \$16.95
- (2) Includes refunds of \$10,571.43 but is exclusive of reversions to Treasury (Economy Legislation) of \$302.39.
- (3) Includes refunds of \$20.94 but is exclusive of reversions to Treasury (Economy Legislation) of \$3,209.09.

Total Congressional appropriations.....	\$12,836,710.00
Less - Reversions to Treasury (Economy Legislations).....	\$25,116.70
Transfer to U. S. Engineer Department (Lowell Creek flood control).....	417.21
Balance unexpended.....	<u>489,715.40</u>
Amount expended.....	12,321,460.69
Add Navy Department reimbursement.....	3,976.19
Add repayments and voucher correctoins, 1920-1929.....	<u>19,269.44</u>
Total expenditures.....	<u>12,344,706.32</u>
Total Alaska fund.....	3,917,167.45
Add sales, refunds, etc., 1905-1929.....	<u>130,182.29</u>
Less balance unexpended July 1, 1933.....	47,350.76
Total expenditures.....	<u>3,999,998.98</u>

These expenditures are summarized as follows:

Federal Appropriations

Congressional appropriations.....	\$12,344,706.32
Alaska fund, 1905-1933.....	3,982,946.75
U. S. Treasury adjustment, 1921.....	17,052.23
Increase compensation acts, 1918-1925.....	95,076.45
Quartermaster General, 1925-1932.....	7,957.10
National Park Service, 1925-1933.....	<u>773,146.82</u>
Total.....	<u>17,220,885.67</u>

Contributed Funds

Territory of Alaska, 1920-1933.....	1,634,467.07
Miscellaneous.....	<u>152,508.82</u>
Total.....	<u>1,786,975.89</u>
Grand total.....	<u>19,007,861.56</u>

In addition to the above funds, disbursed through the United States Treasury, the Commission has supervised the expenditure of the following funds, disbursed by other agencies, for road and trail development:

Territorial funds and forest revenues prior to 1921.....	684,239.64
Territorial divisional commissioners, 1921-1929.....	194,939.60
Seward Peninsula tramway, 1923.....	24,014.00
Tolovana tramway, 1924.....	6,425.00
Kaltag portage survey, 1925.....	312.72
Miscellaneous, 1926-1930.....	<u>22,349.50</u>
Total.....	<u>932,280.46</u>

Materials, Supplies and Equipment

Alaska products are preferably used in the work when the price and quality compare favorably with the cost of the same items landed at warehouses in Alaska.

All supplies not procured in Alaska are purchased for the Commission by a governmental purchasing agency in Seattle, acting also for various other bureaus operating the Territory. The cost of this service is shared by the individual bureaus on a pro rata basis. The share for the Alaska Road Commission is 4 percent of the invoice price of items thus purchased.

Work is performed by mechanical equipment to every extent deemed advantageous. Small jobs in remote sections are necessarily done by hand. The Commission is now fully equipped to handle construction and maintenance work within the present limits of appropriations except for replacement of unserviceable or obsolete equipment. During the fiscal year just closed the following pieces of mechanical equipment were purchased:

- 4 dump truck, 1 1/2 yard
- 1 tractor, 30 h.p.
- 3 scrapers, automatic rotary fresno
- 1 mower
- 4 graders, power.

Organization

Labor, both common and skilled, is secured entirely from local residents. Due to decreased appropriations and the general business depression the supply of labor has been plentiful the past year. In fact, some of the oldest employees were hired for only short periods and others were entirely without work. It is encouraging to note the exceptional loyalty to the organization which is manifested generally even by the lowest paid laborers. This may be attributed in part to the fact that, though the work is only seasonal, many of these men have worked for the Commission continuously for 5 to 10 seasons and in part to the fact that as a whole Alaska labor is probably superior to that found elsewhere.

The general scheme of operations is practically the same as under the War Department previous to the transfer of the organization to the Department of the Interior on July 1, 1932. There has also, except of course for the military personnel, been little change in the personnel of the organization. At the Juneau headquarters, located in the Federal and Territorial Building, is the general office staff consisting of a chief engineer and an assistant chief engineer with necessary clerical assistants. Disbursing is performed by the disbursing officer for the Department of the Interior at Juneau.

Bridges are built of native or imported timber or steel, depending on their importance. Fir has been found to be the most suitable material for timber bridges but improvements in methods of local timber production now in progress will, if successful, make possible some use of Alaska hemlock for structural purposes. Metal culverts are being introduced to replace the culverts of native timber heretofore used.

Operations during the Fiscal Year

The work in the past fiscal year was confined largely to maintenance and improvement of the chief existing routes.

The Richardson Highway was open from Valdez to Fairbanks from June 17 to October 23 except for a 7-day period in August when cloudbursts and continual rains took out a bridge at Mile 226 and otherwise seriously damaged the road in that vicinity. Similar experiences on the Alaska Railroad closed that route to the Interior during the period August 6th to 20th. Fortunately, the two routes were not closed simultaneously.

The surfacing program for the Steese Highway was continued and at the end of the season only 23.5 miles of the total of 163 miles remained unsurfaced.

An additional 7 miles of the Gulkana-Nabesna road, leading from the Richardson Highway to the Nabesna mining region, were improved to an extent permitting the use of automobile trucks, making a total of 64 miles thus completed and leaving 41.5 miles yet to be completed. This 41.5-mile section has been made suitable for a summer tractor road.

The highway through Mt. McKinley National Park was opened for an additional distance of 11.75 miles, the constructed portion of the route now totaling 66.25 miles in length and leaving 22 miles to be completed. When completed the route will extend to the north park boundary, only 9 miles from the Kantishna mining district, a district reported to contain quantities of very valuable ores.

Insufficient funds prevented resumption of work on the Olnes-Livengood project. The project was begun in the summer of 1931.

Work accomplished during the fiscal year is summarized as follows:

New construction: 21.5 miles road, 59.5 miles sled road, 340 linear feet of bridges of 60-foot span or over (renewals) and 1,732 linear feet of trestle span.

Improvement: 30.6 miles road reconstructed, 54.14 miles road surfaced with 72,387 cubic yards gravel, 319 linear feet of retaining walls built and numerous culverts replaced.

Maintenance: 1,552 miles road, 74 miles tramway, 707 miles sled road, 4,687 miles permanent trail and 329 miles of temporary flagged trail were maintained at their usual standard.

The total mileage of all routes, as of June 30, 1933, is as follows:

	<u>Road</u>	<u>Sled Road</u>	<u>Trail</u>	<u>Flagged Trail</u>	<u>Grand Total</u>
June 30, 1932.....(a)	1,701 1/2	1,495 1/2	7,332	712	11,231
Fiscal Year 1933					
New mileage.....	15 1/2	-----	103	----	118 1/2
Reclassified.....	<u>18 3/4</u>	<u>121 1/2</u>	<u>-104 1/4</u>	<u>----</u>	<u>-----</u>
Total.....	1,735 3/4	1,617	7,284 3/4	712	11,349 1/2
No work of either maintenance or improvement during fiscal year 1933.....	107 1/4	910	2,597 3/4	383	3,998

(a) Includes 74 miles tram road.

Proposed Operations

In addition to \$469,300 from appropriated funds, it is estimated there will be available from the "Alaska Fund" and Territorial appropriations \$210,000, for the fiscal year ending June 30, 1934.

These funds will be required for normal maintenance of the existing system and for a limited improvement of certain sections. Surfacing will be provided where possible with available funds and a limited mileage of tractor road will be improved to an extent permitting the use of truck traffic in dry weather only.

Recommendations.

For the fiscal year ending June 30, 1935 an appropriation of \$800,000 is recommended in addition to funds available from other sources. This will provide for necessary maintenance to the existing system and for the continuance of a reasonable program of construction on projects now under way.

The principal projects on which new work would be performed are as follows:

Gulkana-Nabesna. Completion of a truck road to the Nabesna River.

Olnes-Livengood. This project would be placed on a program insuring completion in three years.

Willow Station-Lucky Shot. Continued improvement to provide a truck road.

Iliamna Bay-Iliamna Lake. Completion of road.

Talkeetna-Peters Creek. Completion of tractor road.

In addition to the above listed projects work will be required on a number of small projects to serve developments as they occur.

A well planned program required definite assurance that funds will be provided at a uniform rate. This allows for a definite plan for procurement and economical use of equipment as well as the building up of a well balanced and competent supervisory force. Such a plan is impossible under wide fluctuation of available funds from year to year.

Twenty Nine Years' Service.

With the period covered by this report the Alaska Road Commission concludes its twenty-ninth year of service. The work accomplished consists of the construction and maintenance of 1,755 3/4 miles of wagon and tram road, most of which is suitable for automobiles, 1,617 miles of winter sled road, 7,284 3/4 miles of trail and 712 miles of flagged trail. The total costs to the end of the fiscal year are \$18,708,683.89, of which \$9,543,641.05 was for new work and \$9,165,042.84 was for maintenance and improvement. The total expenditures to date are \$19,007,861.56 of which \$13,220,886.69 were derived from Federal appropriation acts. The balance, \$5,786,974.87, or over 30 percent of the total expenditures, was obtained from Alaska sources.

The pioneer period of the Alaska Road Commission is largely over. all existing mileage has been opened and improved, so far as funds have permitted. The present system of roads serves as the basis for future development of overland routes throughout the Territory. This development calls only for additional funds for construction.

Costs.

A standard cost system is maintained in all districts, from which, over a period of years, valuable information can be secured in the preparation of estimates. In the use of such data, however, consideration must be given to the large differences in freight rates, labor costs and climatic conditions in the various sections.

In the interior of Alaska the average cost for construction of a mile of gravel-surfaced road capable of continuous traffic in any kind of summer weather, and of such width as to enable cars to pass at any point, is \$9,000.

Annual maintenance costs, including minor improvements, are roughly considered as \$300 per mile for wagon roads, \$25 for sled roads, \$10 for trails and \$3 for flagged trails. For the working seasons of 1932 bare maintenance, exclusive of necessary improvements, was \$137.08 per mile for roads, \$8.07 for sled roads and \$2.83 for trails. Roads were kept open for traffic, except in unusual circumstances as heretofore noted, but in certain instances maintenance was insufficient due to lack of funds.

Very little engineering is done on roads after the final survey is made. A resident engineering force is never maintained. To take the place of a permanent engineering force on a new job, foremen of long experience are employed and advised frequently by superintendents who are either engineers or men of wide experience on engineering work of this nature in Alaska.

Dispensing with relatively large engineering forces has reduced costs materially and, due to the low type of construction undertaken, has not adversely affected the work to any extent.

The Richardson Highway, which with the Edgerton Cutoff from Chitina totals 410 miles, is now in such condition that a 2-ton truck can ordinarily travel from Valdez to Fairbanks, 3700 miles, in 18 hours. Actually the first automobile went over this route in 1913 but due to lack of funds improvement to a fair standard proceeded slowly. The total average cost per mile to June 30, 1933 for construction and maintenance including all costs for clearing, etc. for the 8-year period previous to 1913 for the 410 miles, is \$17,054.62.

The Steese Highway extending from Fairbanks to Circle, a distance of 162 miles, is suitable for traffic not exceeding 2-ton trucks. Including maintenance of completed sections over a period of 15 years, the total cost per mile of this road to June 30, 1933 is \$10,701.40.

A consolidated cost statement of all routes follows:

CONSOLIDATED COST SUMMARY

No.	Sub-project Name	Cost 1933	Total Cost to June 30, 1933	Cost Main- tenance and Improvement 1933	Total cost Maintenance and Improve- ment to June 30, 1933	Cost Con- struction 1933	Total Cost Construction to June 30, 1933
1*	Prince of Wales Island.....	\$ ---	\$63,850.26	\$ ---	\$21,038.40	\$ ---	\$42,811.86
2A*	Auk Bay Extension.....	---	60,404.43	---	12,300.30	---	48,104.13
2B*	Mendenhall Glacier Extension	---	15,150.21	---	7,644.57	---	7,505.64
2C*	Eagle River Extension.....	---	18,362.32	---	3,360.00	---	15,002.32
2D*	Juneau-Duck Creek.....	---	109,658.27	---	31,250.55	---	78,407.72
2E	Gastineau Channel Bar.....	---	30,007.83	---	1,386.00	---	28,621.83
2F	Gold Creek Bridge, Juneau...	---	2,156.75	---	---	---	2,156.75
2G	Alaska Juneau Mine Trail....	---	831.66	---	---	---	831.66
2H	Juneau Wharf.....	2,850.98	33,818.51	2,850.98	3,602.20	---	30,216.31
2J	Juneau Float.....	26.99	5,206.79	26.99	72.37	---	5,134.42
3A	Haines-Wells.....	3,582.56	246,788.90	3,582.56	123,158.91	---	123,629.99
3B	Pleasant Camp Extension.....	2,989.44	173,699.64	2,989.44	31,505.44	---	142,194.20
3C	Porcupine Extension.....	---	47,634.63	---	9,279.73	---	38,354.90
3D	Haines-Mud Bay.....	80.37	32,144.66	80.37	13,337.20	---	18,807.46
3E	Haines-Chilkoot.....	725.28	20,950.14	725.28	2,713.58	---	18,236.56
3F	Haines-Jones Point.....	---	2,353.20	---	799.75	---	1,553.45
3G	Chilkoot Barracks water supply	---	28,344.60	---	---	---	28,344.60
3H	Chilkoot Barracks roads.....	---	1,252.50	---	1,252.52	---	---
4A**	Donnelly-Washburn.....	---	33,460.06	---	14,594.66	---	18,865.40
4AA	Richardson-Democrat Creek...	---	2,320.59	---	---	---	2,320.59
4AB	Donnelly Avation Field.....	---	137.42	---	14.11	---	123.31
4BA	Valdez-Ptarmigan Drop.....	35,858.23	1,103,752.86	35,858.23	633,196.31	---	470,556.55
4BA	Dyke.....	5,311.64	124,412.00	5,311.64	68,346.02	---	56,065.98
4BB	Ptarmigan Drop-Ernestine....	9,463.52	461,026.07	9,463.52	289,798.51	---	171,227.56
4C	Ernestine-Willow Creek.....	5,218.13	368,304.23	5,218.13	190,804.38	---	177,499.85
4D	Willow Creek-Gulkana.....	23,990.47	630,045.48	23,990.47	383,650.90	---	246,394.58
4E	Gulkana-Sourdough.....	1,021.84	385,058.09	1,021.84	240,884.39	---	144,173.70
4F	Sourdough-Mile 168.....	1,126.34	326,008.28	1,126.34	189,749.99	---	136,258.29
4G	Mile 168-Delta River.....	3,708.88	541,733.39	3,708.88	383,117.50	---	158,615.89
4H1	Delta River-Rapids.....	49,420.92	772,648.54	49,420.92	512,682.94	---	259,965.60
4H2	Rapids-Grundler.....	12,590.06	415,776.10	12,590.06	295,389.98	---	120,386.12
4I	Grundler-Richardson.....	2,514.13	348,321.00	2,514.13	227,027.00	---	121,294.00

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No.	Sub-project Name	Cost 1933	Total cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
4J	Richardson-Salchaket.....	\$11,136.14	\$459,423.10	\$11,136.14	\$243,905.09	\$ ---	\$215,518.01
4JA	Lake Harding Road.....	---	5,068.96	---	1,968.21	---	3,100.75
4K	Salchaket-Fairbanks.....	6,538.75	555,320.23	6,538.75	300,357.36	---	254,962.87
4KA	Salcha Bridge.....	12,462.80	93,669.67	12,462.80	43,299.00	---	50,370.67
5**	Ester-Dunbar.....	---	19,405.18	---	6,781.00	---	12,624.18
5A	Dunbar-Tanana.....	2,097.69	91,280.43	2,097.69	41,010.74	---	50,269.69
5B	Nenana-Campbells.....	---	2,025.61	---	106.60	---	1,919.01
5C	Fish Lake-American Creek....	---	7,501.43	---	1,734.90	---	5,766.53
5D	American Creek Aviation Field	---	940.00	---	---	---	940.00
5E	Tanana Aviation Field.....	---	4,274.92	---	374.96	---	3,899.96
5F	Illinois Creek-Moran Creek..	---	1,178.89	---	---	---	1,178.89
6A	Willow Creek-Tonsina.....	1,730.79	231,189.38	1,730.79	121,528.60	---	109,660.78
6B	Tonsina-Chitina.....	7,783.37	361,610.58	7,783.37	216,247.89	---	145,362.69
6D	Chitina Depot.....	---	14,600.78	---	2,662.12	---	11,938.66
6E	Chitina-Native School.....	469.55	1,069.21	469.55	574.15	---	495.06
6F	Lower Tonsina Aviation Field	---	1,587.15	---	---	---	1,587.15
6G	Copper Center Aviation Field	---	276.92	---	76.33	---	200.59
6H	Chitina Aviation Field.....	---	110.85	---	---	---	110.85
7A	Summit-Chatanika.....	4,527.54	85,035.94	4,527.54	44,273.23	---	40,762.71
7AA	Cleary Creek.....	828.51	9,204.07	828.51	4,886.26	---	4,317.81
7B	Fox-Olnes.....	128.32	50,938.23	128.32	22,846.58	---	28,091.65
7BA	Dome-Spaulding Mine.....	30.04	3,250.35	30.04	410.98	---	2,839.37
7BB**	Fox-Steel Creek.....	---	855.75	---	---	---	855.75
7C	Summit-Fairbanks Creek.....	2,098.17	55,353.06	2,098.17	30,450.45	---	24,902.61
7CA	Summit-Fish Creek.....	220.99	16,782.14	220.99	4,001.32	---	12,780.82
7D	Ester Creek.....	3,959.23	88,964.83	3,959.23	50,307.90	---	38,656.93
7DA	College Spur.....	8.63	1,400.15	8.63	870.15	---	530.00
7DB	Ester Dome.....	14.33	4,697.64	14.33	504.91	---	4,192.73
7DC	St. Patricks-Happy.....	58.87	7,175.44	58.87	1,105.97	---	6,069.47
7DD	Ester-Beegler.....	---	1,010.28	---	10.28	---	1,000.00
7DE	Ready Bullion Creek.....	365.30	365.30	---	---	365.30	365.30
7E**	Vault Creek.....	---	4,875.20	---	172.37	---	4,702.83
7F**	Vault Creek-Treasure Creek..	---	1,379.09	---	29.09	---	1,350.00
7G	Fairbanks-Gilmore.....	5,731.54	189,109.46	5,731.54	118,706.71	---	70,402.75
7GA	Lazelle Road.....	---	6,024.96	---	1,911.45	---	4,113.51
7H	Little Eldorado Creek.....	566.49	22,393.38	566.49	13,815.07	---	8,578.31
7I	Gilmore-Summit.....	4,816.54	59,003.77	4,816.54	39,840.45	---	19,163.32

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No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
7IA**	Gilmore Creek.....	\$ ---	\$1,562.00	\$ ---	\$ ---	\$ ---	\$1,562.00
7J	Fairbanks-Chena Hot Springs..	360.38	17,978.95	360.38	9,946.36	---	8,032.59
7JA	Chena River Branc.....	522.99	2,176.36	522.99	1,562.35	---	614.01
7JB	Palmer Creek Aviation.....	---	839.11	---	264.11	---	575.00
7JC	Colorado Creek-South Fork....	---	600.00	---	---	---	600.00
7K	Olmes-Livengood.....	10,430.63	63,348.09	---	2,170.39	10,430.63	61,177.70
7N	Farmers-Birch Hill.....	2,166.87	27,581.23	2,166.87	13,179.26	---	14,401.97
7NA	Isabelle Creek.....	369.39	2,853.77	369.39	1,178.77	---	1,675.00
7NB	Ballaine-Rickert.....	8.92	1,935.68	8.92	135.68	---	1,800.00
7R	Goldstream-O'Connor Creek....	108.92	662.56	108.92	507.92	---	154.64
7S	Graehl Bridges.....	1,730.46	6,625.25	1,730.46	3,574.89	---	3,050.36
7T	Farmers-Chena Slough.....	335.35	17,432.66	335.35	6,233.89	---	11,198.77
7V	Fairbanks-Wireless.....	---	495.46	---	495.46	---	---
7X	Chena Hot Springs Aviation Field	---	1,739.58	---	50.00	---	1,689.58
7Y	Fairbanks Aviation Field.....	---	19,969.33	---	498.11	---	19,471.22
7Z	Fairbanks Aviation Field.....	---	766.66	---	---	---	766.66
8	Nome-Council.....	9,615.65	432,027.25	9,615.65	252,644.29	---	179,382.96
8D	Council-Ophir Creek.....	827.30	8,632.12	827.30	8,632.12	---	---
8H	Case de Paga.....	378.47	32,735.74	378.47	15,296.09	---	17,439.65
8J	Shovel Creek.....	---	66.55	---	8.05	---	58.50
8K	Council Aviation Field.....	---	2,244.27	---	845.03	---	1,399.24
8L	Port Safety Aids.....	---	616.50	---	616.50	---	---
9	Rampart-Eureka.....	1,598.69	53,911.35	1,598.69	24,796.69	---	29,114.36
10*	Seward-Kenai Lake.....	---	80,783.93	---	34,523.10	---	46,260.83
10A*	Seward-Radio.....	---	\$6,594.04	---	124.00	---	6,470.00
10B*	Seward-Nash.....	---	21,996.00	---	8,753.70	---	13,242.30
10C*	Lowell Creek Flood Control..	---	124,663.54	---	11,424.92	---	113,238.62
10D	Seward Aviation Field.....	---	10,343.61	---	245.75	---	10,097.86
11A	Eagle-Liberty.....	4,660.17	123,743.63	4,660.17	70,321.08	---	53,422.50
11B	American Summit-Fortymile...	1,419.21	28,364.52	1,419.21	8,113.33	---	20,251.10
11C	Steel Creek-Mouth of Walker's Fork.....	443.18	8,933.24	434.18	4,300.74	---	4,632.50
11D	Steel Creek-Walker's Fork...	---	6,446.20	---	2,336.20	---	4,110.00
11E	Eagle-Seventymile.....	467.36	20,853.25	467.36	15,888.66	---	4,964.59
11F	Liberty-Chicken.....	1,140.14	18,579.88	1,140.14	14,565.61	---	4,014.27
11G	Steel Creek-Canyon Creek....	41.03	955.03	41.03	955.03	---	---

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
11J	Fortymile-Chicken.....	31.36	76.11	31.36	76.11	---	---
11K	Fortymile-Steel Creek.....	---	80.00	---	80.00	---	---
11L	Franklin-Chicken.....	264.11	2,107.86	264.11	2,107.86	---	---
11M	Jack Wade-Walker's Fork- Boundary.....	59.60	350.47	59.60	350.47	---	---
11N	Lillywig Creek.....	---	909.50	---	---	---	909.50
11P	Chicken Aviation Field.....	---	2,749.14	---	49.00	---	2,700.14
110	Eagle Aviation Field.....	---	2,762.98	---	742.23	---	2,020.75
12A**	Mile 34-Lynx Creek.....	---	22,192.66	---	8,239.03	---	13,953.63
13A	Nome-Bessie.....	1,845.22	88,474.31	1,845.22	49,932.36	---	38,541.95
13B	Bessie-Snake River.....	3,703.33	86,178.35	3,703.33	56,645.23	---	29,533.12
13BA	Snake River-Monument Creek..	---	1,788.65	---	371.38	---	1,417.27
13C	Bessie-Sunset Creek.....	15,283.94	51,698.04	2,143.94	17,285.76	13,140.00	34,412.28
13D**	Bessie-Dry Creek.....	---	3,289.20	---	1,706.73	---	1,582.47
13E**	Dry Creek-Newton.....	---	623.74	---	223.86	---	399.88
13F	Nome-Osborne.....	1,026.62	57,854.54	1,026.62	42,460.75	---	15,393.79
13G**	Grass Gulch.....	---	1,125.73	---	338.94	---	786.79
13H**	Center Creek.....	---	1,538.80	---	1,455.15	---	83.65
13J**	Wonder-Flat Creek.....	---	2,803.72	---	2,633.22	---	170.50
13K	Bessie-Buster.....	2,251.23	56,088.04	2,251.23	38,584.06	---	17,503.98
13L	Nome Buoys.....	---	585.00	---	585.00	---	---
13M	Nome Depot.....	---	4,832.42	---	4,832.42	---	---
14*	Sitka-Indian River.....	---	9,610.88	---	3,336.16	---	6,274.72
14	Sitka-Indian River.....	175.97	6,947.73	175.97	3,384.73	---	3,563.00
14A	Sitka National Monument....	741.63	12,937.71	741.63	11,387.71	---	1,550.00
14B	Sitka National Cemetery....	---	9,233.02	---	5,733.02	---	3,500.00
14C	Sitka-Pioneer Cemetery.....	136.57	4,535.73	136.57	1,194.71	---	3,341.02
14D	National Cemetry Road.....	385.05	2,378.35	385.05	1,680.88	---	697.47
15	Circle-Miller House.....	6,083.08	590,064.81	6,083.08	157,376.78	---	432,688.03
15A	Central House-Circle Hot Springs.....	706.03	32,887.57	706.03	10,386.87	---	22,500.70
15B	Central House-Deadwood.....	166.55	12,218.43	166.55	166.55	---	12,051.88
15C	Circle Hot Springs Aviation Field.....	---	1,702.21	---	385.71	---	1,316.50
15D	Leech Cutoff.....	---	224.75	---	---	---	224.75
15E	Miller House Spur.....	64.25	2,270.47	64.25	399.94	---	1,870.53
16	Chatanika-Miller House.....	57,669.51	810,412.89	57,669.51	274,804.38	---	535,608.51

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
16C	Chatanika-Miller House (Winter)	\$13.65	\$23,275.76	\$ 13.65	\$8,661.02	\$ ---	\$14,614.74
16D	Sourdough Creek Branch.....	1,012.35	3,982.76	1,012.35	1,218.64	---	2,764.12
17	Tanana-Kaltag.....	178.91	34,414.24	178.91	10,676.44	---	23,737.80
17A**	Lewis Landing-Dishkaket....	---	483.37	---	---	---	483.37
17B**	Nulato-Dishkaket.....	---	735.88	---	250.00	---	485.88
17C	Nulato Aviation Field.....	---	5,026.02	---	14.13	---	5,011.89
17D	Tanana-Kaltag Telephone Line	---	6,683.59	---	6,683.59	---	---
18	Kaltag-Nome.....	1,130.81	71,665.98	1,130.81	43,528.59	---	28,137.39
18A	Bonanza-Kotzebue.....	665.05	10,406.35	665.05	9,176.35	---	1,230.00
18B	Golovin-Council.....	132.50	519.44	132.50	519.44	---	---
18D	Unalakleet Aviation Field..	---	1,641.17	---	199.50	---	1,441.67
18E	Solomon Aviation Field.....	---	719.83	---	624.83	---	95.00
18F	Golovin Aviaion Field.....	---	1,751.97	---	172.90	---	1,579.07
18G	Moses Aviation Field.....	---	254.20	---	29.20	---	225.00
18H	Kaltag-Unalakleet Telephone Line	---	2,454.00	---	2,454.00	---	---
18J	Spruce Creek.....	---	287.50	---	---	---	287.50
19**	Kern Creek-Knik.....	---	13,891.95	---	3,615.73	---	10,276.22
19A**	Kenai Lake-Kern Creek.....	---	6,833.20	---	---	---	6,833.20
19B**	Mile 27-Mile 29, A.N. R.R..	---	741.66	---	---	---	741.66
19C**	Kenai Lake-Mile 27, A.N.R.R.	---	1,595.81	---	---	---	1,595.81
19D**	Kern Creek-Indian Creek....	---	3,758.26	---	---	---	3,758.26
19E*	Girdwood-Crow Creek.....	---	3,434.15	---	2,542.50	---	891.65
20A**	Knik-Susitna.....	---	8,437.44	---	629.59	---	7,807.85
16A	U. S. Creek Branch.....	---	12,362.79	---	1,990.66	---	10,372.13
16B	Eagle Creek Spur.....	---	306.03	---	224.86	---	81.17
20B	Susitna-Rainy Pass.....	---	32,876.98	---	6,598.69	---	26,278.29
20C	Rainy Pass-Big River.....	---	16,436.46	---	1,927.39	---	14,509.07
20D**	Dishakaket-Kaltag.....	---	4,290.00	---	38.60	---	4,251.40
20DA	Takotna-Ophir (Winter)...	---	4,896.47	---	1,096.47	---	3,800.00
20DB	Ophir-Dishkaket.....	---	4,335.00	---	760.00	---	3,575.00
20E**	Susitna-McDougal.....	---	8,640.21	---	---	---	8,640.21
20F**	McDougal-Cache Creek.....	---	7,350.00	---	347.10	---	7,002.90
20G**	Lakeview-McDougal.....	---	3,675.00	---	---	---	3,675.00
20H	Nancy-Susitna.....	---	2,773.36	---	2,773.36	---	---
20J	Susitna-Tyonek.....	---	4,122.45	---	1,478.52	---	2,643.93
20K	Susitna Aviation Field...	---	931.10	---	---	---	931.10
21	Unalakleet-St. Michael...	---	8,896.33	---	6,293.70	---	2,602.63

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No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total Cost Construction to 6-30-33
21A	St. Michael Aviation Field	\$ ---	\$ 110.00	\$ ---	\$ ---	\$ ---	\$ 110.00
22	Hot Springs-Sullivan Creek	353.58	60,521.95	353.58	32,698.11	---	27,823.84
23A	Snowshoe-Beaver.....	---	14,163.03	---	3,227.58	---	10,935.45
23B	Beaver-Caro.....	1,424.70	66,623.60	1,424.70	36,240.81	---	30,240.81
23C	Big Creek.....	---	9,614.77	---	3,294.77	---	6,320.00
23D	Caro-Flat Creek.....	---	16,517.56	---	12,494.30	---	4,023.26
23E	Caro-Coldfoot.....	---	13,167.45	---	5,607.59	---	7,559.87
23F	Chandalar Aviation Field.	---	8,335.74	---	120.00	---	8,215.74
24*	Mile 29, A.N.R.R.-Sunrise	---	57,850.94	---	27,123.09	---	30,727.85
24A*	Lynx Creek-Six Mile.....	---	10,882.40	---	3,800.00	---	7,082.40
24B*	Sunrise-Hope.....	---	1,085.00	---	200.00	---	885.00
25A*	Cripple River.....	---	8,801.79	---	3,743.82	---	5,057.97
25B**	Penny River.....	---	9,614.77	---	691.05	---	1,276.03
25C	Nome Wireless.....	176.79	3,815.43	176.79	2,050.52	---	1,764.91
25D	Mouth of Center Creek.....	1,227.19	27,456.64	1,227.19	19,955.57	---	7,501.07
25DA	Little Creek Branch.....	328.69	4,406.89	328.69	610.19	---	3,796.70
25E	Submarine Paystreak.....	1,258.03	36,814.36	1,258.03	12,444.03	---	24,370.33
25H**	Otter Creek.....	---	1,802.52	---	652.98	---	1,149.54
25K	Nome City Dock.....	---	2,966.65	---	---	---	2,966.65
25L	Nome Aviation Field.....	---	8,982.43	---	5,459.73	---	3,522.70
25M	Telephone Lines-Seward Peninsula	---	13,149.20	---	11,449.20	---	1,700.00
25N	Nome City Streets.....	---	1,319.57	---	1,319.57	---	---
25P	Nome Harbor Lights.....	---	815.29	---	815.29	---	---
25R	Radio Telephones.....	---	6,477.34	---	---	---	6,477.34
26	Candle-Candle Creek.....	1,838.75	85,319.50	1,838.75	50,325.43	---	34,994.07
26A**	Kugruk River Approach.....	---	438.00	---	488.00	---	---
26B	Bear Creek Trail.....	107.23	720.32	107.23	380.32	---	340.00
26C	Candle-Kiwalik.....	35.50	1,063.41	35.50	35.50	---	1,027.91
26D	Kiwalik Aviation Field....	---	873.50	---	573.50	---	300.00
26E	Candle Aviation Field.....	---	1,355.00	---	---	---	1,355.00
26F	Telephone Line Reconnaissance	---	148.00	---	148.00	---	---
26G	Candle-Radio Road.....	---	575.00	---	---	---	575.00
27	Deering-Inmachuk.....	2,867.95	102,782.23	2,867.95	71,890.33	---	30,891.90
27A	Deering Aviation Field....	---	1,159.65	---	137.65	---	1,022.00
28	Shelton-Candle.....	---	12,368.89	---	4,161.87	---	8,207.02
28A	Nome-Serpentine Hot Springs	1,572.78	17,567.71	1,572.78	12,378.71	---	5,239.00
29	Tanana-Bettles.....	100.00	12,352.29	100.00	5,340.18	---	7,012.11

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No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
29A	Bettles-Coldfoot.....	\$ 505.13	\$19,240.02	\$ 505.13	\$14,110.02	\$ ---	\$5,130.00
29C	Mile 70-Hughes.....	---	2,167.02	---	458.45	---	1,708.57
29D	Wild River Trail.....	---	1,425.76	---	1,425.76	---	---
29E	Bettles River Aviation Field	---	500.00	---	---	---	500.00
30	Hot Springs Landing-Eureka..	4,565.14	80,828.30	4,565.14	60,402.49	---	20,425.81
30A	Hot Springs-Tofty.....	---	6,683.47	---	2,374.21	---	4,309.26
30B	Manley Hot Springs Aviation Field	---	1,189.98	---	49.98	---	1,140.00
31	Caribou Creek.....	809.02	14,443.64	809.02	5,862.72	---	8,580.92
32A	Takotna-Flat (Summer).....	---	9,247.94	---	3,810.65	---	5,437.29
32AA	Takotna-Flat (via Moore Creek)	---	123.83	---	123.83	---	---
32AB	Flat-Moore Creek.....	---	15.00	---	15.00	---	---
32AC	Candle Creek-Takotna.....	---	1,216.09	---	1,216.09	---	---
32B	Iditarod-Flat.....	2,419.51	123,009.00	2,419.51	67,122.73	---	55,886.27
32BA	Iditiarod River Improvement.	---	100.00	---	---	---	100.00
32C	Ophir-Iditarod.....	---	7,747.26	---	2,747.26	---	5,000.00
32D	Flat-Crooked Creek.....	382.66	6,315.23	382.66	4,835.23	---	1,480.00
32DD	Flat-Georgetown.....	---	150.00	---	150.00	---	---
32E	Takotna Aviation Field.....	---	3,859.87	---	437.43	---	3,422.44
32F	Takotna-Depot.....	503.01	13,567.13	503.01	5,957.86	---	7,609.27
33A**	Otter Creek Towpath.....	---	448.23	---	---	---	448.23
33B**	Summit-Otter Creek.....	---	5,047.66	---	5,047.66	---	---
33C	Flat City-Flat Creek.....	698.28	5,452.96	698.28	5,452.96	---	---
33D	Head Flat Creek-Willow Creek	366.64	7,608.52	366.64	6,365.52	---	1,243.00
33E	Head Flat Creek-Willow Creek	838.43	9,946.62	838.43	8,446.62	---	1,500.00
33F	Flat City-Otter Discover...	829.29	21,494.58	828.29	9,679.88	---	11,814.70
33G	Candle Landing-Candle Creek	---	6,572.00	---	975.00	---	5,597.00
33H	Flat Aviation Field.....	---	3,123.42	---	223.42	---	2,900.00
34**	Iditarod-Dishaket.....	---	4,830.98	---	100.00	---	4,730.98
34A	Flat-Holy Cross-Anvik.....	168.23	2,088.37	168.23	2,088.37	---	---
34B	Iditarod-Shageluk-Anvik....	161.81	1,285.59	161.81	785.59	---	500.00
35A	Archangel Extension.....	327.95	31,441.23	327.95	14,243.31	---	17,197.92
35AA	Sherry Branck.....	---	1,768.49	---	649.17	---	1,119.32
35AB**	Fairangel Extension.....	---	104.20	---	---	---	104.20
35B	Palmer-Fishhook.....	1,039.71	39,931.99	1,039.71	15,244.07	---	24,687.92
35C	Palmer-Matanuska River.....	166.94	34,869.27	166.94	11,213.11	---	23,656.16
35D	Willow Creek Extension.....	5,922.30	114,790.59	5,922.30	76,656.45	---	38,134.14
35DA	Gold Chord Branch.....	719.52	12,337.01	719.52	1,745.77	---	10,591.24

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
35DB	Lucky Shot-St. Peters.....	\$17,377.18	\$71,718.46	\$ 3,077.18	\$ 3,077.18	\$14,300.00	\$68,641.28
35E	Wasilla-Fishhook.....	3,952.04	131,119.28	3,952.04	97,706.65	---	33,412.63
35F	Wasilla-Knik.....	1,408.54	53,755.05	1,408.54	27,319.58	---	26,435.47
35G	Palmer-Spring.....	27.68	3,201.44	27.68	1,628.12	---	1,573.32
35H	Wasilla-Finger Lake-Palmer.	680.87	36,961.25	680.87	17,904.02	---	19,057.23
35I	Moose-Palmer.....	---	2,520.62	---	627.53	---	1,893.09
35J	Wasilla-Matanuska.....	1,457.13	27,840.71	1,457.13	18,564.48	---	9,276.23
35K	Matanuska Trunk Road.....	2,519.45	49,885.83	2,519.45	34,834.37	---	15,051.46
35L	Palmer-Matanuska.....	1,181.17	16,953.11	1,181.17	8,548.41	---	8,404.70
35N	Houston-Willow Creek.....	---	1,212.32	---	272.00	---	940.32
35O	Fishhook-Goldmint.....	726.71	25,708.99	726.71	8,172.16	---	17,536.83
35P**	Moose Creek-Baxter.....	---	2,218.62	---	---	---	2,218.62
35Q	Edlund Road.....	27.00	3,180.02	27.00	628.33	---	2,551.69
35R	Bogard Road.....	334.96	13,849.07	334.96	1,620.49	---	12,228.58
35RA	Engstrom Road.....	---	1,020.00	---	---	---	1,020.00
35S	Moose Creek Trail.....	---	2,118.44	---	77.43	---	2,041.01
35T	Werner Connection.....	16.00	502.94	16.00	16.00	---	486.94
35U	Moose Creek Aviation Field...	---	481.75	---	20.25	---	461.50
35V	Fishhook Aviation Field.....	---	917.49	---	68.75	---	848.74
35W	Wasilla Aviation Field.....	---	459.50	---	---	---	459.50
35X	Wasilla Aviation Field Road..	76.25	1,267.36	76.25	131.42	---	1,135.94
36	Mineral Creek.....	---	50,633.37	---	25,318.36	---	35,315.01
36A	Granby Road.....	---	3,431.35	---	349.44	---	3,081.91
36B	South Second Street, Cordova.	---	3,373.15	---	---	---	3,373.15
36C	Eyak Lake Road.....	---	7,735.85	---	---	---	7,735.85
36CA	Cordova Aviation Field.....	---	941.90	---	15.75	---	926.15
36D**	Valdez-Quartz Creek.....	---	524.75	---	---	---	524.75
36E**	Valdez-Glacier.....	---	616.91	---	---	---	616.91
36F**	Shoups Bay.....	---	3,457.25	---	---	---	3,457.25
37	Topkok-Candle.....	---	1,026.56	---	210.00	---	816.56
37A	Bluff-White Mountain.....	13.70	3,286.93	13.70	13.70	---	3,273.23
37B	Bluff Aviation Field.....	---	80.00	---	---	---	80.00
38A	Ruby-Long.....	8,206.36	246,013.60	8,206.36	113,993.25	---	132,020.35
38B	Poorman-Cripple.....	964.78	4,721.82	964.78	3,218.86	---	1,502.96
38C	Ophir-Cripple.....	367.14	4,368.72	367.14	2,469.72	---	1,899.00
38D	Ophir-Takotna.....	3,501.92	267,648.23	3,501.92	93,140.73	---	174,507.50
38DA	Little Creek Road.....	157.28	13,342.80	157.28	2,694.75	---	10,648.04

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
38E	Long-Poorman.....	\$4,164.17	\$162,309.34	\$ 4,164.17	\$ 45,116.78	\$ ---	117,192.56
38EE	Long-Poorman (Winter).....	177.01	5,555.01	177.01	287.01	---	5,268.00
38EEE	Tamarack-Poorman.....	---	22,322.69	---	---	---	22,322.69
38F	Poorman-Ophir.....	---	3,030.44	---	3,030.44	---	---
38G	Takotna Aviation Field Road.	144.23	9,078.47	144.23	1,144.23	---	7,934.24
38H	Ganes Creek Road.....	177.78	15,108.49	177.78	11,704.64	---	3,403.85
38K	Ruby Aviation Field.....	---	2,098.51	---	898.51	---	1,200.00
38L	Ruby Aviation Field Road....	---	500.00	---	---	---	500.00
38M	Ophir Aviation Field.....	---	1,825.12	---	---	---	1,825.12
39*	Juneau-Sheep Creek.....	---	45,929.40	---	20,539.27	---	25,390.13
40*	Douglas-Castineau Channel...	---	18,616.56	---	6,596.68	---	12,019.88
41	Kiana-Klery Creek.....	9.14	3,915.08	9.14	900.32	---	3,014.76
41A	Kotzebue-Shungnak.....	104.81	4,098.12	104.81	4,098.12	---	---
41AA	Kiana-Selawik-Shungnak.....	750.43	1,541.83	750.43	750.43	---	791.40
41B	Kotzebue-Point Barrow.....	14.20	6,079.79	14.20	1,679.77	---	4,400.02
41C	Kiwalik-Noorvik.....	59.17	513.42	59.17	513.42	---	---
41D	Kotzebue Aviation Field.....	---	1,955.45	---	537.90	---	1,417.55
41E	Kobuk Aviation Field.....	---	2,299.00	---	---	---	2,299.00
41F	Kotzebue-Noatak.....	45.58	45.58	---	---	45.58	45.58
42	St. Michael-Kotlik.....	347.59	2,733.10	347.59	2,733.10	---	---
43*	Petersburg-Scow Bay.....	---	23,466.23	---	9,968.56	---	13,497.67
44*	Skagway Valley.....	---	11,124.83	---	2,320.88	---	8,803.95
44A	Skagway Trails.....	639.05	18,472.46	639.05	7,313.75	---	11,158.71
44B	Skagway Aviation Field.....	---	7,048.87	---	236.34	---	6,785.53
45*	Silver Bow Basin.....	---	23,466.21	---	17,527.59	---	5,938.62
46	Kobi-Eureka.....	---	16,437.54	---	3,865.91	---	12,571.63
46A	Roosevelt-Kantishna.....	---	61,686.53	---	19,723.84	---	41,962.69
46B	Lignite-Kantishna.....	---	13,130.00	---	1,163.09	---	11,966.91
46C	Nenana-Knight's Roadhouse...	199.41	3,850.44	199.41	2,257.86	---	1,592.58
46D	McKinley Park Road.....	76,790.91	798,228.29	12,688.93	100,596.21	64,101.98	697,632.00
46E	Diamond-Telida.....	---	10,276.40	---	3,464.84	---	6,811.56
46F	Nenana Cemetery Road.....	266.76	7,873.27	266.76	4,054.64	---	3,818.63
46G	Kobi-Bonnifield.....	---	5,767.51	---	60.90	---	5,706.61
46H	Lake Minchumina Aviation Field	---	914.11	---	164.11	---	750.00
46J	Kantishna Aviation Field....	---	775.00	---	100.00	---	675.00
46K	Telida Aviation Field.....	---	850.00	---	250.00	---	600.00
46M	Nenana Aviation Field.....	---	1,108.04	---	388.04	---	720.00

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
47	Coldfoot-Wiseman.....	\$ 7.66	\$16,263.00	\$ 7.66	\$ 7,320.39	\$ ---	\$ 8,942.61
47A	Wiseman Aviation Field.....	---	6,434.02	---	2,320.77	---	4,113.25
47B	Nolan Branch.....	2,586.73	28,316.56	2,586.73	9,681.82	---	18,634.74
47C	Wiseman-Hammond.....	1,469.23	9,366.93	1,469.23	5,399.86	---	3,967.07
48	Iliamna Bay-Iliamna Lake....	103.31	71,852.68	103.31	7,609.77	---	64,242.91
49	Davidson's Landing-Taylor...	1,838.08	21,768.33	1,838.08	14,055.16	---	7,713.17
50*	Stikine River.....	---	2,256.75	---	---	---	2,256.75
51	Talkeetna-Cache Creek.....	8,872.14	286,015.23	8,872.14	120,675.88	---	165,339.35
51A	Cache Creek Trail.....	---	4,553.11	---	2,283.11	---	2,270.00
51B	Peters Creek Trail.....	3,267.41	17,900.11	3,267.41	5,412.22	---	12,487.89
51C	Yentna-Mills Creek.....	---	5,174.80	---	44.36	---	5,130.44
51E	Mills Creek-Cache Creek....	29.50	2,283.33	29.50	975.88	---	1,307.45
51F	Cache Creek Aviation Field.	---	179.90	---	---	---	179.90
52*	Ketchikan-Ward's Cove.....	---	26,120.42	---	5,000.00	---	21,120.42
52A*	Ketchikan-Charcoal Point...	---	15,500.48	---	3,000.00	---	12,500.48
53	Eagle-Circle.....	---	5,846.59	---	4,161.87	---	1,684.72
53A	Circle-Fort Yukon.....	58.57	7,988.55	58.57	3,821.98	---	4,166.57
53B	Fort Yukon Aviation Field..	---	3,098.00	---	557.11	---	2,540.89
54	Chisana-Nizina.....	---	10,303.37	---	2,976.07	---	7,327.30
54A	Chisana Aviation Field.....	---	1,744.63	---	250.00	---	1,494.63
54B	Nabesna Aviation Field.....	---	2,001.48	---	524.90	---	1,476.58
55	Kenai-Russian River.....	---	14,186.58	---	7,627.32	---	6,559.26
55A	Kenai Aviation Field.....	---	901.51	---	---	---	901.51
56**	Tasnuma.....	---	1,058.14	---	---	---	1,058.14
56B**	Katalla-Chilkat.....	---	7,752.56	---	---	---	7,752.56
57	McCarthy-Dan Creek.....	9,109.90	239,654.22	9,109.90	88,301.99	---	151,352.23
57A	Nizina River Bridge.....	11,067.09	179,816.72	11,067.09	53,874.92	---	125,941.80
57B	Nizina-Chitina River.....	67.97	7,794.59	67.97	956.01	---	6,838.58
57C	McCarthy-Kennecott River...	11.13	527.40	11.13	527.40	---	---
57D	Chititu Branch.....	393.33	8,258.75	393.33	2,030.27	---	6,228.48
57E	McCarthy-Green Butte.....	141.68	2,319.68	141.26	2,319.68	---	---
57F	McCarthy Aviation Field....	---	2,925.11	---	344.23	---	2,580.88
57G	Copper Creek Trail.....	---	301.98	---	---	---	301.98
57H	Chitina River Aviation Field	---	735.00	---	---	---	735.00
58*	Hyder-Salmon River.....	---	63.50	---	---	---	63.50
59	Fairbanks Bridge.....	148.98	74,096.01	148.98	12,396.71	---	61,699.30
60A	Valdez Aviation Field.....	---	2,558.24	---	206.59	---	2,351.65

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No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total Cost Construction to 6-30-33
60B	Upper Tonsina Aviation Field	\$ ---	\$1,747.47	\$ ---	\$ 47.50	\$ ---	\$ 1,699.97
61	Strelna-Kuskulana.....	---	17,106.28	---	4,569.73	---	12,536.55
61A	Kotsina Trail.....	---	16,095.29	---	1,523.74	---	14,571.55
61B	Nugget Creek Extension.....	---	1,630.00	---	1,630.00	---	---
61C**	Elliot-Kotsina.....	---	6,858.42	---	---	---	6,858.42
61E	Farnan Trail.....	---	941.96	---	15.80	---	926.16
61F	Bremner Trail.....	2,187.04	7,402.51	---	46.73	2,187.04	7,355.78
61G	Bremner Aviation Field.....	---	500.00	---	---	---	500.00
62	Dime Creek.....	886.89	79,756.13	886.89	36,053.17	---	43,702.96
62A	Haycock-Bear Creek.....	253.42	771.24	253.42	555.24	---	216.00
62B	Haycock Aviation Field.....	---	2,115.40	---	---	---	2,115.40
62C	Koyuk Aviation Field.....	---	312.98	---	285.90	---	27.08
63	Dunbar-Brooks.....	738.06	32,263.78	738.06	13,034.19	---	19,229.59
63B	Brooks-Livengood Creek.....	548.93	33,772.81	548.93	13,707.95	---	20,064.86
63BA	Amy Creek Branch.....	---	2,363.45	---	300.00	---	2,068.45
63C**	Brooks Tram.....	---	63,455.39	---	45,144.09	---	18,311.30
63D	Brooks Aviation Field Road..	---	713.00	---	---	---	713.00
63E	Livengood Aviation Field....	---	2,778.87	---	524.87	---	2,154.00
64**	Cripple-Lewis Landing.....	---	100.00	---	100.00	---	---
64A	Cripple-Cripple Mountain... 427.28	427.28	980.93	427.28	688.93	---	292.00
64AA	Cripple-Cripple Mountain (Winter) ---	---	860.03	---	248.98	---	611.05
65A	Gulkana-Chistochina.....	5,497.04	355,932.70	5,497.04	88,069.20	---	267,863.50
65B	Chistochina-Slate Creek....	1,037.59	8,170.50	537.59	647.09	500.00	7,523.41
65C	Chistochina-Slane.....	16,529.98	142,804.49	8,529.98	13,628.18	8,000.00	129,176.31
65D	Kechumstuk-Tanana Crossing.	---	1,669.82	---	1,669.82	---	---
65E	Chicken-Kechumstuk.....	---	1,663.50	---	1,663.50	---	---
65F	Grundler-Tanana Crossing... 294.07	294.07	12,468.24	294.07	3,095.53	---	9,372.71
65G	Slana-Chisana.....	30,362.29	47,080.18	---	980.12	30,362.29	46,100.06
65H	Tanana Crossing Aviation Field	---	550.00	---	---	---	550.00
65K	Chistochina Aviation Field.	---	2,067.97	---	---	---	2,067.97
66**	Matanuska-Chickaloon.....	---	1,268.30	---	---	---	1,268.30
67	Nome-Teller.....	694.89	12,192.58	694.89	11,892.58	---	300.00
67A	Teller-Cape Prince of Wales	298.49	3,269.47	298.49	3,269.47	---	---
67B	Teller-Bluestone.....	1,806.47	13,756.74	1,806.47	8,080.29	---	5,676.45
67C	Teller-Pilgrim Hot Springs.	33.76	3,171.81	33.76	1,371.81	---	1,800.00
67D	Teller-American River.....	---	906.34	---	56.67	---	849.67
67E	Teller-Aviation Field.....	---	1,071.20	---	318.40	---	752.80

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
67F	Tin City-Goodwin.....	\$ ---	\$2,659.42	\$ ---	\$561.60	\$ ---	\$2,097.82
67G	Lost River Aviation Field..	---	121.40	---	---	---	121.40
67H	Wales Aviation Field.....	---	121.40	---	---	---	121.40
67J	Wooley-Gold Run.....	---	29.25	---	29.25	---	---
68	Flagging Trails.....	1,682.07	100,517.19	1,682.07	100,517.19	---	---
70	Miscellaneous Surveys and Reconnaissances.....	680.30	22,184.14	680.30	1,719.06	---	20,465.08
72*	Wrangell Oil Dock.....	---	4,964.97	---	---	---	4,964.97
72A*	Wrangell Cemetery Road.....	---	8,639.22	---	2,350.00	---	6,289.22
73	Marshall Road.....	---	23,569.93	---	8,090.88	---	15,479.05
73A	Kotlik-Marshall.....	505.98	4,120.63	505.98	3,270.63	---	850.00
73B	Stuyahok.....	---	1,660.00	---	---	---	1,660.00
73C	Old Hamilton-Scamnon Bay...	311.98	2,752.16	311.98	898.71	---	1,853.45
73D	Marshall Aviation Field....	---	2,100.00	---	100.00	---	2,000.00
73E	Paimute-Marshall.....	100.00	100.00	100.00	100.00	---	---
75	Anchorage Loop.....	4,032.70	125,574.04	4,032.70	68,570.25	---	57,003.79
75A	Anchorage-Lake Spenard.....	995.23	22,938.04	995.23	12,927.81	---	10,010.23
75C	Chester Creek Boat Landing.	135.00	1,476.18	135.00	693.75	---	782.42
75D	Anchorage Depot.....	172.60	7,556.53	172.60	3,590.18	---	3,966.35
75E	McDonald Road.....	142.28	2,962.31	142.28	1,857.18	---	1,105.13
75G**	East First Street, Anchorage	---	1,023.46	---	---	---	1,023.46
75H	Lake Spearnd Aviation Field	---	277.45	---	---	---	277.45
75I	Oilwell Road.....	290.38	7,588.15	290.38	2,998.16	---	4,589.99
75J	Anchorage Aviation Field...	---	4,768.20	---	154.20	---	4,614.00
75L	Anchorage Loop-Eklutna.....	---	2,525.46	---	---	---	2,525.46
75M	Anchorage-Radio Road.....	27.00	475.09	27.00	27.00	---	448.09
76	Cantwell-Valdez Creek.....	---	10,793.95	---	2,953.75	---	7,840.20
76A	Valdez Creek Aviation Field	---	1,337.10	---	---	---	1,337.10
78	Valdez Depot.....	---	5,266.56	---	5,266.56	---	---
79	Seward Depot.....	51.00	4,222.55	51.00	4,222.55	---	---
80A	McGrath-Takotna.....	---	368.05	---	368.05	---	---
80AA	McGrath-Takotna.....	14.67	5,089.82	14.67	2,907.82	---	2,182.00
80B	McGrath-Telida.....	---	12,376.59	---	5,198.38	---	7,178.21
80C	McGrath-Candle Creek.....	---	305.29	---	305.29	---	---
80D	Nixon Fork-Nixon Mine.....	---	2,384.78	---	36.78	---	2,348.00
90B	Shelter Cabins, 2nd Division	---	39,197.96	---	7,286.65	---	31,911.30
90C	Shelter Cabins, 3rd Division	---	24,720.02	---	2,328.90	---	22,391.12

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
90D	Shelter Cabins, 4th Division	\$ ---	\$42,449.33	\$ ---	\$5,495.15	\$ ---	\$ 36,954.18
91*	Yakutat.....	---	50.55	---	---	---	50.55
92A	Bethel-Quinhagak.....	152.67	3,131.88	152.67	1,334.38	---	1,797.50
92B	Bethel-Tuluksak.....	715.22	4,470.35	715.22	2,991.87	---	1,478.48
92C	Akiak-Russian Mission.....	---	1,734.75	---	150.75	---	1,584.00
92D	Bennett's Cutoff.....	---	396.00	---	---	---	396.00
92E	Yukon-Kuskokwim Portage.....	44.70	27,586.36	44.70	1,070.38	---	26,515.98
92F	Quinhagak-Good News Bay.....	---	2,863.27	---	445.50	---	2,417.77
92G	Good News Bay-Togiak.....	---	2,428.57	---	225.24	---	2,203.33
92H	Togial-Nushagak.....	---	8,492.98	---	4,300.82	---	4,192.16
92I	Lewis Point-Naknek.....	---	4,171.66	---	1,539.32	---	2,632.34
92J	Naknek-Egegik.....	---	2,982.84	---	877.84	---	2,105.00
92K	Egegik-Kanatak.....	---	1,168.50	---	818.50	---	350.00
92L	Crooked Creek-Aniak.....	72.00	2,021.74	72.00	1,201.74	---	820.00
92M	Aniak-Tuluksak.....	886.65	4,814.00	886.65	2,299.04	---	2,514.96
92N	Akiak-Canyon Creek.....	---	306.00	---	306.00	---	---
92O	Tuluksak-Foothills.....	---	1,471.94	---	286.82	---	1,185.12
92P	Holy Cross-Kaltshak.....	70.00	1,432.77	70.00	932.77	---	500.00
92Q	Upper Landins-Bear Creek....	1,100.00	9,319.02	1,100.00	5,219.02	---	4,100.00
92R	Dillingham-Snag Point.....	35.75	16,453.33	35.75	35.75	---	16,417.58
93	Chulitna Trail.....	77.12	8,976.56	77.12	2,020.12	---	6,956.44
93A	Bull River Trail.....	153.88	4,669.48	153.88	1,087.16	---	3,582.32
93B	Indian River.....	1,984.64	8,564.27	1,984.64	1,998.04	---	6,566.23
93C	Curry Aviation Field.....	---	4,221.05	---	844.45	---	3,376.60
93E	Hidden River Tram.....	9.28	145.20	9.28	9.28	---	135.92
94	Kodiak-Abberts.....	1,598.08	64,217.15	1,598.08	17,408.64	---	46,808.51
95	Kanatak-Becharof Lake.....	---	30,276.74	---	6,394.43	---	23,882.31
95B	Larsen Bay-Karluk River....	---	962.05	---	---	---	962.05
96	Chickaloon-King River.....	36.00	1,906.68	36.00	1,106.68	---	800.00
96A	Chickaloon-Cable.....	82.00	486.44	82.00	214.15	---	272.29
96B	Chickaloon-Nelchina.....	224.57	8,508.40	224.57	1,008.03	---	7,500.37
97	Suntrana Footbridge.....	---	413.80	---	---	---	413.80
97A	Healy Aviation Field.....	---	491.79	---	---	---	491.79
98	Homer Spit.....	459.80	37,934.55	459.80	5,064.80	---	32,869.75
98A	Nuka Bay.....	---	5,757.75	---	2,106.77	---	3,650.98
98B	Ninilchik Aviation Field...	---	384.18	---	---	---	384.18
98C	Kasilof Aviation Field.....	---	674.52	---	---	---	674.52

No.	Sub-project Name	Cost 1933	Total Cost to 6-30-33	Cost M & I 1933	Total Cost M & I to 6-30-33	Cost Con. 1933	Total cost Construction to 6-30-33
98D	Kasilof Road.....	\$ 375.40	\$18,533.85	\$ 375.40	\$1,387.50	\$ ---	\$ 17,146.35
100	Office and General Overhead	34,192.79	614,516.05	27,354.24	334,838.21	6,838.55	279,677.84
101	Territorial General Overhead	---	71,521.31	---	31,584.89	---	39,936.42
	Total Costs.....	\$692,835.32	\$19,640,964.35(a)	\$542,563.95	\$9,212,140.66	\$150,271.37	\$10,428,823.69
110	Book Value of Plant.....	-18,219.03***	72,128.53	---	---	---	---
111	Supplies and Materials on Hand	20,419.87	227,049.14	---	---	---	---
	Total Expenditures...	\$695,036.16(b)	\$19,940,142.02	---	---	---	---

*Transferred to other departments

** Abandoned.

***To be deducted, as this amount included in costs from deferred accounts.

(a) Includes \$932,280.46 of supervised funds

(b) Includes \$1,971.94 General Accounting Office settlements. Does not include \$4,809.84 reimbursements and receipts from sales.

The following shows the cost of cooperative projects, with the source of revenue:

Costs in Detail--Cooperative Projects

(Included in preceding table)

	<u>Alaska Road Commission</u>	<u>Contributed</u>	<u>Total</u>
2H Juneau Wharf	\$2,695.78	\$155.20 (1)	\$2,850.98
2J Juneau Float	-----	26.99 (1)	26.99
7D Fairbanks-Ester.....	3,017.10	942.13 (2)	3,959.23
13A Nome-Dessie.....	1,756.47	88.75 (3)	1,845.22
14A Sitka National Monument.....	458.60 (4)	283.03 (5)	741.63
15A Central House-Circle Hot Springs	661.03	45.00 (6)	706.03
35D Willow Creek Extension.....	5,847.30	75.00 (7)	5,922.30
35DB Lucky Shot-Willow Station.....	15,397.18	1,980.00 (8)	17,377.18
65G Slana-Chisana.....	27,324.68	5,037.61 (9)	30,362.29
75I Oilwell Road.....	225.38	65.00 (10)	290.38
Total.....	<u>\$57,383.52</u>	<u>\$6,698.71</u>	<u>\$64,082.23</u>

(1) By the U. S. Forest Service, U. S. Bureau of Fisheries and the Alaska Game Commission.

(2) by the City of Fairbanks, The Fairbanks Telephone co. and the Fairbanks Exploration Co.

(3) By the Northern Air Transport co.

(4) Allotted by the National Park Service

(5) By the National Park Service

(6) By F. M. Leach.

(7) By the cold top syndicate

(8) By the Willow creek Mines

(9) By the Nabesna Mining Corporation

(10) By the Pacific International Airways and C. W. Smith

Total Costs--By District

District	Construction	Maintenance and Improvement	Total
Juneau Office and General Overhead (a)	\$6,838.55	\$27,554.24	\$34,192.79
Southeastern.....	-----	12,459.89	12,459.89
Eagle.....	-----	8,850.63	8,850.63
Valdez.....	-----	55,851.52	55,851.51
Chitina.....	41,049.33	124,607.45	165,656.73
Fairbanks.....	10,795.93	178,397.80	189,193.73
Southwestern.....	78,401.98	39,469.65	137,871.63
Kuskokwim.....	-----	20,091.74	20,091.74
Nome.....	13,185.58	55,481.03	63,666.61
Total cost.....	<u>150,271.37</u>	<u>542,563.95</u>	692,835.32
Plant, materials, etc., undistributed			
Total expenditure			<u>2,200.34</u>
			\$695,036.16(b)

(a) Includes expenses of Seattle Purchasing Office

(b) Includes \$1,971.94 General Accounting Office settlements; does not include \$4,809.84 reimbursements, refunds and receipts from sales.

Appropriations

Construction and maintenance of military and post roads, bridges, and trails, Alaska:

Act of June 12, 1906.....	\$150,000.00
Act of June 20, 1906.....	35,000.00(1)
Act of Mar. 2, 1907.....	250,000.00
Act of May 11, 1908.....	250,000.00
Act of Mar. 3, 1909.....	350,000.00
Act of Mar. 23, 1910.....	100,000.00
Act of Mar. 3, 1911.....	150,000.00
Act of Aug. 24, 1912.....	125,000.00
Act of Mar. 2, 1913.....	155,000.00(2)
Act of Apr. 27, 1914.....	125,000.00
Act of Mar. 4, 1915.....	165,000.00
Act of Aug. 29, 1916.....	500,000.00
Act of May 2, 1917.....	500,000.00
Act of July 9, 1918.....	100,000.00
Act of July 11, 1919.....	100,000.00
Act of June 5, 1920.....	350,000.00
Act of June 30, 1921.....	425,000.00(3)
Act of June 30, 1922.....	465,000.00
Act of Mar. 2, 1923.....	650,600.00(4)
Act of June 7, 1924.....	725,000.00
Act of Dec. 6, 1924.....	55,000.00(5)
Act of Feb. 12, 1925.....	900,000.00
Act of Apr. 15, 1926.....	900,000.00
Act of Feb. 23, 1927.....	1,022,500.00(6)
Act of Mar. 23, 1928.....	925,000.00(7)
Act of Feb. 28, 1929.....	800,000.00
Act of May 28, 1930.....	800,000.00
Act of Feb. 25, 1931.....	800,000.00
Act of July 14, 1932.....	494,310.00
Act of Feb. 17, 1933.....	469,300.00(8)
Total.....	12,836,710.00

- (1) For Fairbanks-Council survey.
- (2) Includes \$55,000 for Valdez dyke
- (3) Includes \$10,000 for Nome-Kiwalik survey
- (4) Includes \$600 for survey Juneau Wharf.
- (5) Deficiency to cover increase of compensation 1925.
- (6) Includes \$422,500 for Juneau Wharf.
- (7) Includes \$100,000 for flood control, Lowell Creek
- (8) Includes \$3,000 for Juneau Wharf.

Construction and maintenance of wagon roads, bridges and trails, "Alaska fund":	
Fiscal years 1905 to 1932 inclusive.....	\$5,828,612.52
Fiscal year 1933.....	<u>68,554.93</u>
Total.....	<u>3,917,167.45</u>
Increase of compensation, War Department:	
Fiscal years 1918 to 1925 inclusive.....	<u>95,059.50</u>
National cemeteries:	
Fiscal years 1925 t 1932 inclusive.....	<u>6,704.60</u>
Roads and trails, National Parks:	
Fiscal years 1925 to 1933 inclusive.....	775,876.37
Fiscal year 1934.....	<u>7,000.00</u>
Total.....	<u>782,376.37</u>
National Monuments:	
Fiscal year 1933.....	500.00
Barracks and quarters:	
Fiscal year 1932.....	<u>1,252.50</u>
Total Federal appropriations.....	<u>17,640,270.42</u>

Contributed Funds.

(Act of Congress approved June 30, 1931, Alaska Special Fund.)

By the Territory: (For list of Acts see Annual Report 1932, pages 81-63.)	
Public roads, bridges, trails, and ferries:	
Fiscal years 1920 to 1932, inclusive.....	1,449,908.58
Shelter cabins	
Fiscal years 1922 to 1932.....	98,585.50
Nizina Bridge	
Fiscal years 1922 to 1923.....	25,000.00
Telephone lines, Seward Peninsula	
Fiscal years 1926 to 1931.....	13,073.20
Pioneer Cemetery Road	
Fiscal years 1927.....	3,341.02
Flood Control, Lowell Creek	
Fiscal year 1929.....	10,000.00

Yukon-Kuskokwim Portage		
Fiscal year 1930.....		\$7,500.00
Valdez Dyke		
Fiscal year 1932.....		10,000.00
Radio Telephones		
Fiscal year 1932.....		6,477.34
Total Territory.....		<u>1,623,895.64</u>
By others:		
Fiscal years 1922 to 1932.....		146,565.66
Fiscal year 1933:		
Willow Creek Mines.....	\$2,100.00	
Nabesna Mining Corporation.....	3,220.00	
Pacific International Airways.....	50.00	
City of Fairbanks.....	770.00	
Gold Top Syndicate.....	75.00	
Fairbanks Telephone Co.	82.13	
C. W. Smith.....	15.00	
Northern Air Transport.....	88.75	
Fairbanks Exploration Co.	90.00	
F. M. Leach.....	45.00	
Government Agencies, Juneau.....	182.19	
National Park Service.....	<u>283.03</u>	<u>7,001.10</u>
Total others.....		<u>153,566.76</u>
Total Contributed Funds.....		<u>1,777,462.40</u>
Total Supervised Funds (see Annual Report, 1932, pages 64 to 66).....		<u>2,840,147.35</u>
Grand total, all funds.....		22,257,880.17

Source: Annual Report of the Alaska road Commission, Juneau Ak. Fiscal Year, 1933. Mimeographed.